

Commerce

SOUTHERN TEXTILE BULLETIN

VOLUME 27

CHARLOTTE, N. C., THURSDAY, DECEMBER 18, 1924

NUMBER 16

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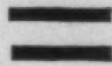
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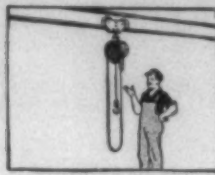
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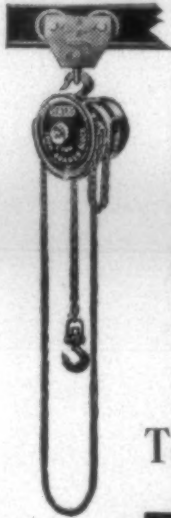
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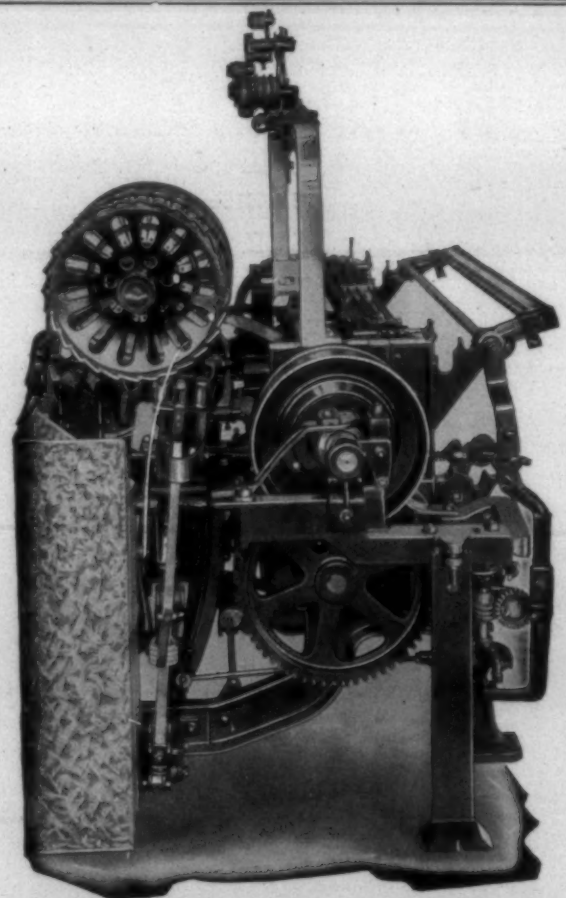
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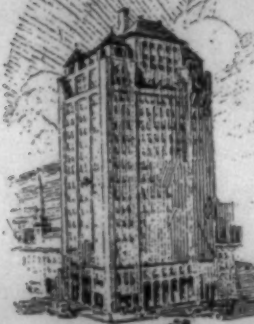
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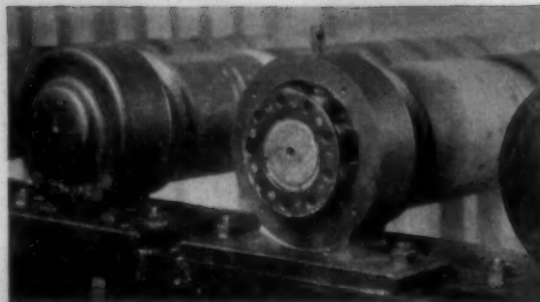
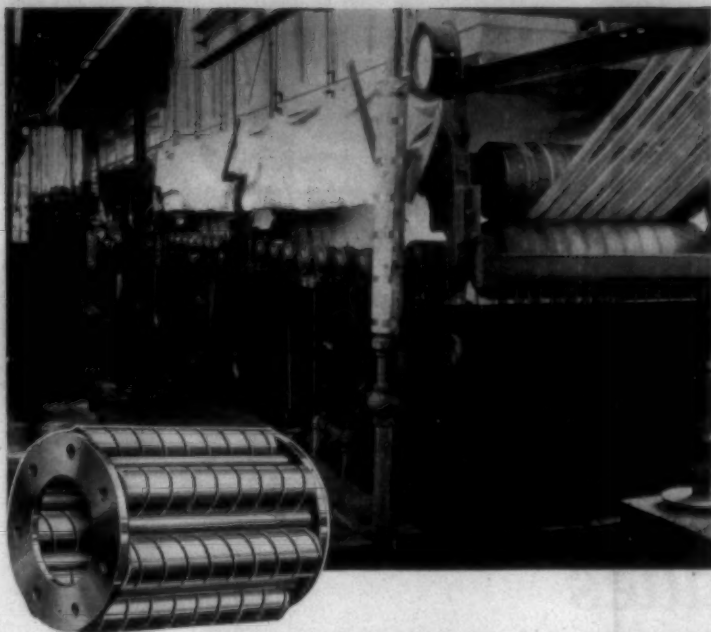
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CHARLOTTE, N. C., THURSDAY, DECEMBER 18, 1924

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Meeting of Carders' Division

THE meeting of the Carders' Division of the Southern Textile Association was held at Greenwood, S. C., on Friday, December 12th.

The meeting opened at 10 o'clock, with Marshall Dilling in the chair.

George T. Barnes, secretary of the Greenwood Chamber of Commerce, expressed warm words of welcome on behalf of the city, to which Mr. Dilling responded thankfully.

Chairman: I wish to say that J. O. Corn, chairman of the Carders' Division, was expected to be here. He wrote me about ten days ago that he was not sure he could be here, because the Board of Directors from Boston were coming down today and he feared he would not be able to get away. I wrote and urged him to be here and after I reached the city this morning, I found he could not be here, so it's up to Mr. Touchstone and myself to take charge of the meeting. We decided that I would take charge of the meeting and Mr. Touchstone would present information. This is your meeting and we want you to get the most out of it that is possible. We want everybody to feel free to talk. We want to give everybody here a chance to talk and to gather information, and to help his fellowman, as each, with the spirit of co-operation, will get benefit. The Southern Textile Association has established in these meetings a spirit of co-operation and made men feel free to discuss the problems that come up every day, and we realize we have been benefited by these things, these discussions. Numbers of mill men have been benefited by coming here and listening to the discussions and have benefited others by entering into the discussions. We want everybody to feel free in these discussions to ask any questions on the subjects, and let's try to get the best possible results. We would first like to get a complete registration of everyone present. Please write your name and address—the mill you represent, etc.—plainly on a piece of paper and hand it in. And in these discussions, on rising to speak, please give your name and the mill you are from. It will be impossible for me to remember every man's name. Simply announce your name so we can record it. No doubt you gentlemen will want to take notes on these things, especially figures that

will be presented. If so, feel free to take them.

Now the first item on the questionnaire publish the last few days is:

What was the gain in percentage of moisture in cotton (meaning local and Western cotton)?

The majority of mills represented here today are on 1" to 1 1/16" cotton. We will be glad to have a report from someone who has taken tests on this cotton. I had some made out a few days ago. Mine was not of the 1 to 1 1/16", but was on 1 3/4" (Mississippi cotton) and we made three tests from the outside of the bale and in these bales we found 9.03, 9.11, 9.10, an average of 9.08 per cent of moisture in those bales—that was from the outside of the bale. Then, from the inside, we found that it had 8.94, 9.02 and 8.71, an average of 8.89 per cent of moisture; or, in the two and average of about 9 per cent of moisture. That was taken right out of the bale and was dried to "bone dry" heating—just exactly the amount of moisture that was in there. I will be glad to hear from Mr. Touchstone if he has some figures on this.

Mr. Touchstone: Mr. Chairman,

Mr. Touchstone: Mr. Chairman, the figures I have are from the Cotton Research Company, of Boston. The cotton was sent from—
to Columbia and they reported on the Western 1". On the outside of the bale was 8.02; on the outside of the bale was 8, an average of 8.1 for one-inch Western cotton. On the local cotton—15-16 South Carolina cotton, on the inside of the bale was 9.03; on the outside 8.04, giving an average of 8.85. We, since that, took a number of samples and sent them up to be tested further. That report, however, has not returned. So that was all the figures I have on that. Now it seems to me just at this time it would be well to ask a question which maybe some of the gentlemen present might answer, which occurred to me a few days ago. I don't know why I have studied it rather extensively, but—in taking the cotton in the opener room with the opener room exposed—say, for instance, everyone that comes in opens the door, and you have two doors there—an open door here—north and south—it is impossible to keep the doors closed, and you have a current of air passing through along with your cotton

heating. Take one of these bales ready to go into the horizontal or vertical opener, or whatever you are going to put it in, you have only got a short distance to go—you have a temperature in winter down around 33 or 34 or 35 degrees, or even down to freezing point when that cotton is open there. That cotton is taken, and goes very quickly, into a temperature of 70 or degrees. What is the effect on that cotton in passing from this cold, clammy atmosphere into this dry heated atmosphere so quickly? I have an idea that it would be something similar to a piece of glass, or any other substance that would create a sweat. Now I get that, after thinking it over, by noticing my breaker laps quite often. It was just that kind of weather—doubtless some of you noticed the same thing—your breaker laps seemed so condensed. Your cotton will feel kind of damp and clammy. I do not know, but perhaps someone could tell us right quickly what is the cause of that. I am interested to know. There is something between the opener room and breaker that affects that cotton. You don't have it in dry weather; but cold or warm. You do have it in very damp, cold weather. I would be glad to hear from some one on that.

Mr. Dilling: In that connection, Mr. Touchstone, how did you send your samples to Boston?

Mr. Touchstone: We sealed them. I saw that whatever moisture was in there would be retained up until it reached the research plant.

Mr. Dilling: Now a number of mills have both facilities for testing moisture on cotton. We would be glad to have a report from anyone who has facilities for carrying that out.

Mr. Wills, of the Department of Agriculture at Clemson College: I might say that we take them—the samples—we take the weight at that time in the room in which we are taking it then and don't care what change comes about—that is tested at our laboratory up to about 30. I might say, if you would like for us to test it out for any of you, if you will send us the cotton we will be glad to do so. At other times, you would like to have tests give us a little previous notice. I have recently come into this work, but Mr. Blair has been in charge of this work several years and I am going

to ask him to answer the questions, because they are fixed in his mind.

W. J. Blair: This talk about moisture. The fellows I had working with me thought I was a crank on the subject of humidity. It started me to studying the thing, and the further I got into it the less I knew.

Mr. Touchstone: Were those sets taken from the cotton when it was received or when in the opener? In other words, the reason I asked the question: Two years ago out in Arizona they made drying tests and they said that the first lot of cotton they shipped to Boston they shipped by water and the pick-up in weight due to shipping by water paid all carrying charged from Phoenix, Ariz., to Boston.

Our records show a test on Fall River cotton, where they obtained 18 and 11 percentage of moisture. If you store on a cement floor you will have a little higher percentage of moisture than if you store the cotton on wooden floor. It doesn't seem that wood retains moisture like cement floor does. There is another question right along that line—the effect of moisture on it if any if you are running low middling cotton or below and could put that cotton—after it comes from the bale breaker—through another and allow it to remain in that again 10 or 15 minutes at a temperature of about 110 to about as low as 130 you would find you would have an exceptionally clean cotton. By raising the temperature of that cotton 110 to 130 the trash or foreign matter is more easily removed from your fibre than at the usual opening room temperature.

Mr. Touchstone: Mr. Chairman, it seems to me that that partially answers the question that I asked. He states that dry cotton will allow foreign matter to be easily removed, consequently it does leave it in good condition.

Mr. Clark: I have found out one essential thing in moisture testing. If you don't have cotton subjected to the specified relative humidity for a long period of time the results don't amount to a row of beans. You don't get anywhere.

Mr. Dilling: This raised a question for investigation. If you can do it in one case—as he stated you can heat cotton and clean it better—why it raises a question to investi-

(Continued on Page 10)

Science of Fabric Construction

By H. D. Martin

(Continued from Last Week)

The science of textiles has developed many peculiar and practical stunts in connection with weaving. It is not generally known among mill men, that cloth may be woven several times the width of the loom. It is very easy to weave cloth two yards wide on a yard-wide loom. Also three, four or more times the width of a loom. A prominent mill in the south wove and filled a large order for cloth woven seven (7) yards wide and which was woven on looms made to weave only one yard wide. This proved to be a remarkable achievement. It has puzzled many mill men to believe how

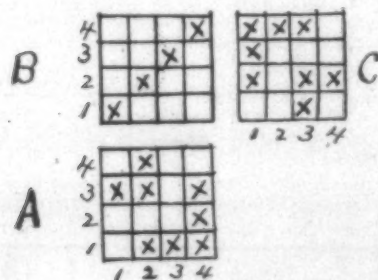


Plate No. 3.

this could be done. And many did not believe it until they saw the operation with their own eyes at the looms in this particular mill. The cloth thus woven was used for wide tobacco cloths, and it was of the netting variety.

Tabular goods like pillow cases, also grain and cement bags are also

a standard product of the looms. It is also a fact that a pair of men's trousers together with pockets complete may be woven on a common dobby loom. A pair of such trousers were woven complete in a prominent northern mill, and were worn by the superintendent of that mill.

Plate No. 3 shows the designers plan for weaving tubular goods on a plain cam or dobby head loom. The A square is the pattern draught. The B square shows how the ends should be drawn-in into harnesses and which is a straight drawing-in plan. The C square is the harness lifting plan. The same plan is used for weaving bags or pockets. The only difference in the movements, is that when weaving pillow tubing

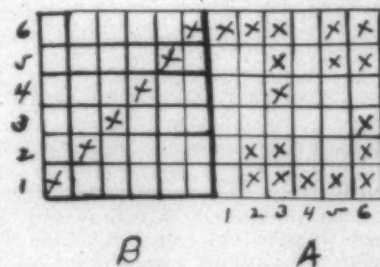


Plate No. 4.

the process is continuous. There is no closing of the ends on the loom. When weaving bags the bottom ends are closed by a special motion which causes the cloth to be woven thru or sewed all the way thru for about 1½ inches. The solidly woven width is cut thru across the

middle, and this will make the bottom for two bags, or one bag as wanted.

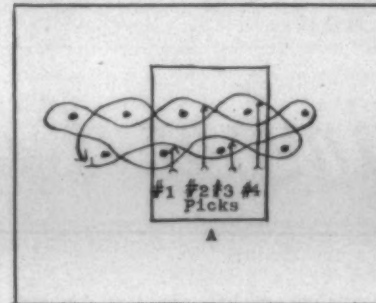


Plate No. 5.

Figure A shows one complete pattern. The picks are numbered to show the movements of the shuttle between the warp ends.

Plate No. 4 shows the design for weaving cloth four yards wide on a yard wide loom. The lifting plan is the same as the pattern A and the drawing-in should be straight as shown at B. In weaving cloth several times the width of the loom, the shuttle merely weaves one pick into each layer all the way down, or else all of the way up first, and then weaves the cross pick all the way back again on the return trip. While weaving bag or tubular goods the shuttle merely runs around in a circle, as it were weaving the first and second picks and then the third and fourth or finishing picks. The plan of movement is clearly indicated by plate No. 5 which shows each pick to complete one

cycle or round of weaving two picks of cloth. The small square within the larger square encloses one complete pattern which requires four picks as seen by the arrows. The serpentine arrow, shows the movement of the shuttle to complete two picks of cloth all around of four picks in all—two for the upper layer of cloth, and two for the lower layer of cloth. Plate No. 6 shows the

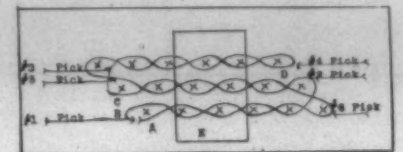


Plate No. 6.

movements of the shuttle in order to weave three layers of cloth on a narrow loom, thus weaving cloth three times the width of the loom. The illustration indicates each pick. It requires 6 picks to complete the

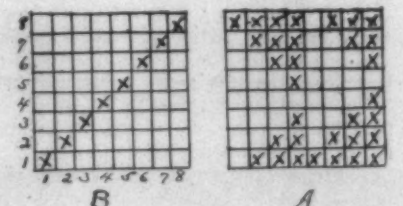
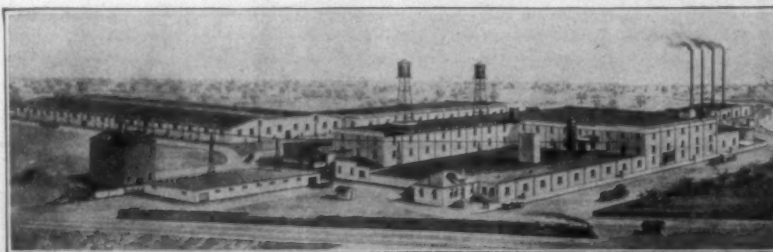


Plate No. 7.

cycle. The first, second and third picks weave one pick in each layer first, and the 3rd., 4th., and 6th. picks, finish the pattern. The start is at the letter A and the finish is (Continued on Page 12)

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Meeting of Carders' Division

(Continued from Page 7)

gate. In this discussion let us be as explicit as we can.

Mr. Blair: If anyone running low middling cotton on a slip psychrometer, if you will take the humidity in that method and get a low relative humidity—say, about 35 or 40—and then watch those laps as they come up front of your pickers and then take another—say, where there's high relative humidity—and fair temperature—I don't care now what temperature, it doesn't matter much—you will get results on good middling cotton—it cleans better dry.

Chairman: In connection with the discussion we have had. Two or three years ago there was considerable discussion on equipping picker rooms with humidifiers.

But if you want pickers to clean cotton we know you can't card it and pick it as well when it is damp as when it is dry. After it passes on to another stage you need humidity more.

That brought up an interesting question to me in connection with moisture. Mr. Blair mentioned cotton taken from Phoenix, Ariz., over to Boston by water and it gained enough in weight to pay carrying charges. Some of us might find there where our invisible waste goes to and why you have so much variation. And some of us may be able to account for our invisible waste from that standpoint. It might be well to look into that.

Mr. Huff: I heard some men talking on moisture in cotton and he said he uses local cotton. A great deal of it he gets from Anderson, and has about 8 per cent moisture—and Texas about 4. Which is most important, trying to clean it or trying to keep moisture in cotton? When you buy it you are paying for moisture. Which is most important—to try to clean cotton by drying the moisture out of it or keeping the moisture in, so it won't lose?

Mr. Blair: Don't worry. You can put it back in.

Mr. Huff: Is it possible for output to be as great as input?

Mr. Blair: It is possible for it to be greater. You can't always control it. If you start to clean cotton you have to lower the relative humidity. You will dry it out going to the pickers. You can't help it. The air current will work on it unless you have humidifiers, because of cleaning process to dry it out. When it gets into the roving cans and spinning, then by the use of humidifiers, restore the moisture.

Chairman: In studying tests sent out by humidifying engineers, they show a chart showing a very high percentage of 8 to 9 per cent even up to 10 per cent in cotton and cotton from bales, then drops down to 3 to 4 per cent in pickers and cards. Then it gradually goes up, and in yarn mills it gets up to a certain point and all slashing and weaving will go higher than that as finished, and also in cloth, runs so high, then drops down again to 5, 8 or 9 per cent.

Mr. Digby, Oakland Mills, New-

berry, S. C.: At this point, from what Mr. Blair said in his discussion, it would be a good proposition to install the best heating system in the opening room and bake cotton over night and run it through the second day and clean it.

Mr. Blair: Well, that's playing with fire. You have got to have top temperature and the time element. Time element is essential. You will not get the results you think you will get if you are using very high grade stock, but with strict low middling and below I doubt that you would get enough on middling cotton to pay you to put in the apparatus. You might. If you raise it too high you are sure to ruin the cotton and if you don't go high enough you ruin your cotton and it's a waste of time.

Chairman: Any figures on moisture? We had here the question on amount of moisture in Western cotton and local cotton. We would like to get figures on that, if possible.

Mr. Blair: We must know whether it was shipped by water or rail. Those conditions have very material bearing.

Chairman: If there's nothing else on that we'll pass on to the question of vertical openers. In the past few years the machinery manufacturers have been building vertical openers and then later have gone into what is known as horizontal openers. They work together and a number of those manufacturers recommend a vertical opener and a horizontal cleaner be used together. They say that horizontal cleaner should not be used by itself. If there's someone here using vertical openers on local and Western cotton we will be glad to hear from them as to results obtained from local and Western cotton on horizontal cleaners—double or single.

Mr. Touchstone: Part of that question would be the condition of the stock after passing through the opener, whether it be vertical or horizontal. The principal reason I raised that question was because it seems as though some people in the last year or two are falling out with vertical openers. They say they don't get as good results from the stock after passing through the vertical opener as the horizontal, and that question is not settled. On the Western one-inch stock the tests on vertical opener taken over a period of five weeks, the Western cotton showing 3.09 per cent taken out. That machine is doing 5,800 pounds per day of ten hours. On the local stock, running another machine by the side of it under the same conditions with same speed 15-16 local cotton we get 4.15 per cent. As for the condition of the stock after leaving the opener I find that the best I could do it, the Western stock was not as loose and fluffy as we would like to have it. It seems local stock is easier handled. It may be from the character of the cotton, though the local stock is what I consider in good condition just ready for the other machine to work right, while the Western stock is not in a good condition.

Mr. Touchstone: We started on all big bales. We drifted on to a mixture. We finally wound up with

(Continued on Page 14)

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by Chas. E. Carpenter

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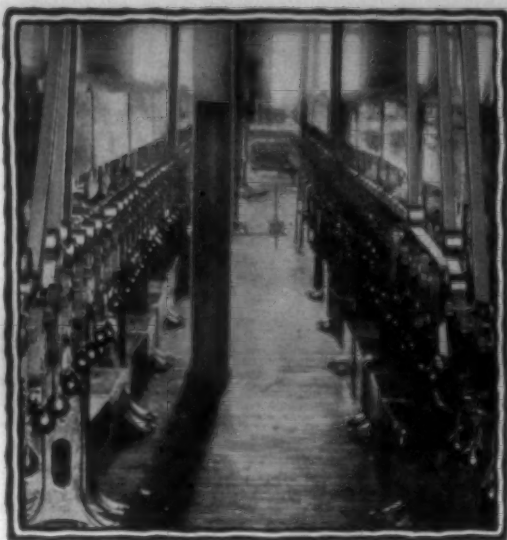
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Science of Fabric Construction

(Continued from Page 8)

at B. It will be noticed that the selvages at C and D are left opened so that when the cloth is woven, it can be opened up three times the width of the loom.

This is all easily understood when it is explained that when weaving the top layer, all of the ends in the bottom layers are depressed so that the shuttle may pass over them and weave the bottom layers, the ends of the top layers are raised so that the shuttle may pass under them. The square E circumscribes one complete pattern for this weave. Plate No. 7 displays the design as it would appear on point paper. A is the pattern draught of the square E in plate No. 6, and is the drawing-in plan. The lifting plan is the same as the pattern plan. It will be noticed that the first or bottom layer of cloth is woven by the 1st. and 6th. picks. The second and fifth picks. While the top layer is woven by the third and fourth picks. These things are mentioned to give the scientific points or the basic facts. Of course it matters not whether the beginning of the weaving is at the top or at the bottom. Neither does it matter the whether commencement of the weaving is at the left hand or at the right hand. The principle is not changed in any case. The basic facts always remain the same and are a fixed standard and which establishes a point in the science of textiles for this class of goods. It may also be accepted as a law of textile weaving that it will take at the least two harnesses for each layer of cloth to be woven if woven on dobby looms; or its equivalent if woven on Jacquard looms. One layer of plain cloth can also be woven on 4, 6 or 8 harnesses. But the same number of ends which would be used in the two necessary harnesses, would merely be distributed evenly upon the 4, 6 or 8 harnesses. Sometimes there are so many ends in a plain piece of goods, that it becomes desirable to have 4 or more harnesses instead of 2.

In connection with novelty weaving, many kinds of cloth have been produced. Cloth may be woven double and tied or sewed together at any interval wanted. Cloth has been successfully woven with pleats, plaits, and tucks of any desired width. The most intricate lace and crochet work has been closely imitated by the weaving processes. Cloths woven with a silk or woolen face, but with cotton backing are common articles of the trade. If a loom is provided with two warps of two different colors, and if the loom is properly arranged, cloth may be woven with a face of each color—one side having one of the colors, while the other side will have only the other color exhibited. Fabrics may also be produced, which is made up of very coarse work on the one side of the cloth, and very fine work on the other side. Such fabrics are usually of the double thickness variety. There are some classes of patterns which make two distinctive fabrics at the same time. One side will be a very nice and attrac-

tive, and the other side of the cloth will have an entirely different pattern but, which will be equally as attractive as the other pattern. Both patterns may also be in plain white as well as in colors.

While there are very many different families of textile fabrics: such as the sateens, twills, corduroys, granites, huckabucks, bird's eye, plains, corded, ducks, lenos, lawns, piles, crashes, marquissettes, etc. Cloths may be woven as combinations of two or more of these various families. For example: a plain piece of goods may be woven with decorations of a few sateen stripes, twill effects, and pointed and dotted with touches from many different families at the same time. This may be found in some of the very best of woven crocheted bedspreads. A single spread may have anything from a honey comb effect to the finest sateen stripes all built and apparently inlaid on a plain and fancy worked background. One of the strongest designs which was ever thrust upon the market was one which was made by mistake. The designer had prepared a design but the weaver wove it in the wrong manner, having misinterpreted the designer's instructions. The woven design was expected in a distant city the next day, but owing to the error it did not appear. But the selling house asked to be permitted to inspect the fabric made by mistake. Meantime the overseer of weaving had been discharged for making the error. To the surprise of all concerned, the mistaken fabric was sold in large amounts as made, and the mill was sold ahead on this particular mongrel pattern. The discharged overseer was sent for and prevailed upon to return to work at an increase in salary, and with profound apologies from the management.

Another case of accidental pattern making was when a bunch of waste became caught in the warp and was unequally woven into the cloth. This freak attracted so much local attention that a sample piece of goods was made with large bunches of waste interwoven at intervals. The result was that a new craze took the market by storm for a season. The science of textile designing embraces the harmony of colorings, also the balancing of patterns, cloth structure, and the utility of fabrics as well as the novelty of fabrics as well as the novelty or the aesthetics of cloth build—the specific object to have them wear well, as well as being of attractive patterns. Other fabrics are built with the only end in view to create a craze-novelty. In such cases near is not considered. These are more generally known as a one season line of goods. And there are other novelty lines which are never worn more than a few times and then cast aside. It is this class of goods which over-tasks the designer's skill. He must ever be ready with something to replace the things cast aside. Here is where the race begins for all of the designers of the trade. Instead of spending just so much time in research work, they have only to build their newly constructed ideas

(Continued on Page 32)

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Meeting of Carders' Division

(Continued from Page 10)

last three weeks with all compressed cotton.

Mr. Digby: Were those tests on compressed — the last bales — big bales or not.

Mr. Touchstone: Well, all Western cotton is compressed and the local the first two weeks. The first week was all entirely big bales. The second week was part big bales and part compressed. The last three weeks was compressed on both kinds.

Mr. Blair: Was the Western cotton shipped by boat or rail?

Mr. Touchstone: I couldn't say.

Mr. Touchstone: On that I might say this was all this year's cotton and the cotton was shipped in from this year's crop.

Chairman: Who else has anything on that who has been making tests on vertical openers? How many have vertical openers? Quite a number. How many have horizontal?

Mr. Campbell: We have vertical openers in both of our mills—with the screen. They did have the screen, and our percentage of waste from the vertical opener with the screen was $\frac{1}{2}$ to 1 per cent. We ordered the grid bars and put in opener and we are now making a test. Hoped to get it ready for this meeting but they only ran one week and that is not a fair test, but I

find it increases the waste and it is very dirty, while the waste lower than it is in the screen, and I find it increases it about 1-30—that is for the last week's run. I haven't this week's run at all.

Chairman: Who has the horizontal cleaner?

Mr. Touchstone: Perhaps someone will state the conditions, using vertical opener and horizontal opener. There seems to have been a question on that a few minutes ago. I would like to hear some expression of the conditions of the stock coming from either one of the machines.

Mr. Campbell: What is the condition of stock? We have not horizontal. We have vertical openers. The condition of the stock is considerably better than before we put in vertical openers and since we put in the bars also we get more from the pickers, more motes and flies. We haven't completed our test.

Chairman: It seems that if you run the cotton first through the vertical and then through the horizontal that the vertical opener opens it up so the horizontal can clean out the dirt, and they get better results with the horizontal after it goes through the vertical than without the vertical. Who else has a vertical and horizontal running together?

Mr. Park, Arcadia, S. C.: We have one section vertical opener and run with horizontal and they get fine results. Which do we get the most

dirt out of, vertical or horizontal? Very little difference. The horizontal. What speed do we run? About 400. What cotton? About 1-inch cotton. We run the two together. Have one horizontal by itself.

Question: What is the difference in amount of waste you get from horizontal that runs by itself and horizontal that runs with the vertical? Answer: I can't see any difference. Question: You get just as much dirt from the horizontal cleaner after it goes through the vertical opener as you get from the horizontal cleaner that does not run through the vertical opener. Answer: Well, the vertical seems to put the cotton in shape that the horizontal could do it more good, that it could otherwise, and no doubt we get better results with the two than with the one. Question: You count results in breaking strength or in cleaning? Answer: In breaking strength and also gives somewhat cleaner work.

Mr. Touchstone: Since you installed horizontal machines you say you installed a vertical one in one mill and the horizontals are both together. You have one mill then with vertical and one with horizontals and vertical? Answer: No, we have one mill with horizontal only and one with both.

Mr. Touchstone: Now in the regularity of your laps coming from this machine, do you experience more trouble in the variation of laps where you have it passing through the two machines? Answer: There

is a little difference in favor of the vertical opener and horizontal together. Question: You have less trouble keeping laps regulated with the two running in tandem than with the one running by itself? Answer: Just a little bit.

Mr. Hightower, Edgefield, S. C.: We use good middling cotton or Western with Murray cleaner running about 420 and the reworkable waste put in tandem. In other words, the reworkable waste goes through the Murray cleaner you get good middling with about 1 per cent of waste from Murray cleaner into a breaking machine running 1260 or 1300 with a 14-ounce law from breaker into the intermediate picker, carding heaters, running 900 to a finishing picker with a beater carding running 850 will finish lap of 12-ounce and card sliver of 45 gdwins and breaker draw frame 50 grains and draw frame 55 grains instead of, say, 75 hank roving on slubber—and intermediate 6 or 7 on fly frames—get splendid results. As to breaking strength for spinning that will come up when the discussion of spinning comes up.

Chairman: Does your breaking strength increase? Answer: Yes, very much.

Chairman: This is a Carders' Meeting and we are supposed to discuss card room problems, but the carding is preparing all this stock for the yarn or the room it eventually goes into. That is where you get results.

(Continued on Page 16)

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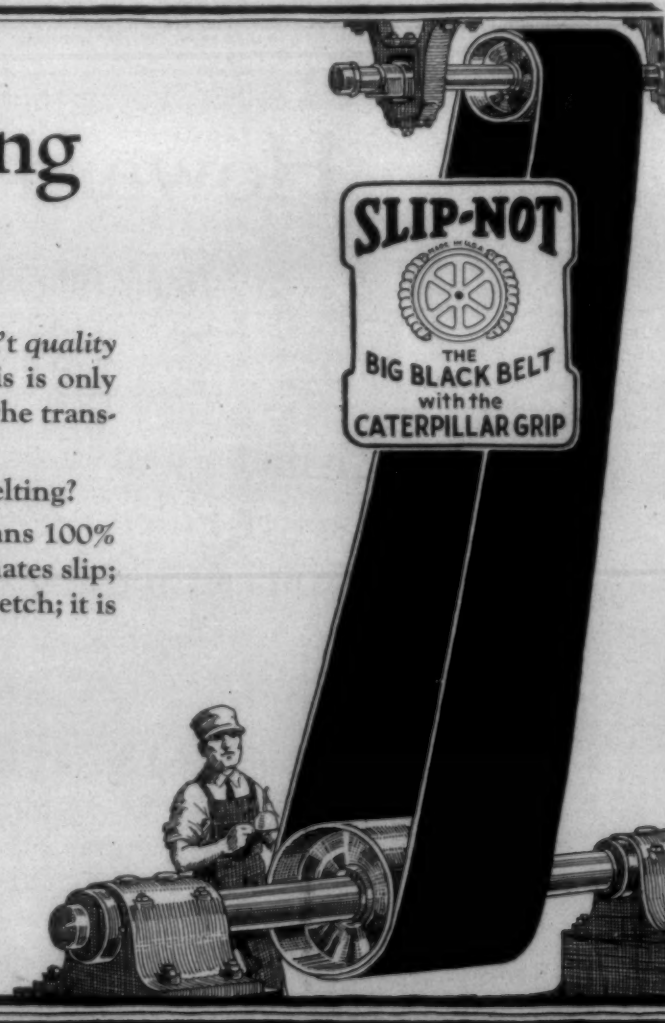
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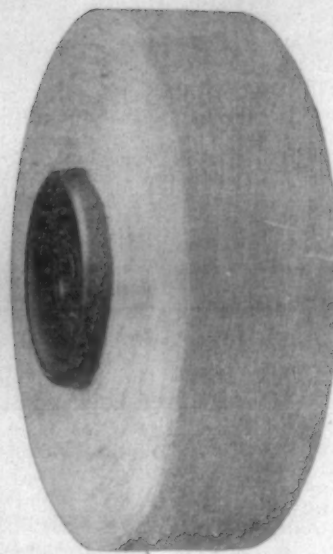
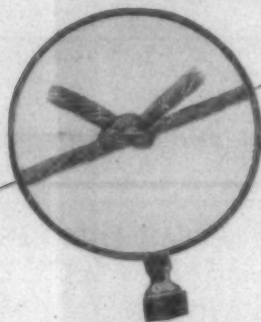




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Meeting of Carders' Division

(Continued from Page 14)

Mr. Hightower: I have my overseer of carding with me and other men who work with him and they'll bear me up in this statement. Our results are fine—splendid. As to the dirt or motes that come from Murray we have been lucky to sell them. We have sold them with the picker motes. We sell ours with picker motes. Question: What is your speed with the horizontal? Answer: 420. Question: What stock? Answer: One inch plus. The cotton and waste reworked run through Kitson No. 1 small waste machine and all goes with cotton into the Murray.

Chairman: Who else has a vertical opener and horizontal cleaner? I am from up in a section where practically all mills use long staple cotton and 1-16 to 1% and there are a number of horizontal cleaners installed in the last few years. Some mills claim that they do not and others have claimed they get excellent results by cutting speed down—say, the longer the staple the slower you must run horizontal, and the shorter the staple the higher the speed. We would like to have reports as to the various speeds and what was found by changing speeds.

Mr. Hightower: What was the result in waste in the Western cotton and local cotton has been asked me. These figures were compiled

yesterday and I made a chart on it and the cotton we got from the West last year was terrible and a lot of waste in it. Our waste on it run as high as 17.81. I bought 100 bales for our mill exclusively and got waste of 14.71, a difference of about 3 per cent—good middling cotton—that was the first picking before this ten days rain came on.

Mr. Kirsey, LaGrange Ga.: One per cent of waste from card room or in finished goods? Was that your total waste, Mr. Hightower, throughout the mill, 17.81, was that total waste—not simply the card room?

Mr. Hightower: O, yes, from the cloth room back to the finished waste.

Chairman: The next thing is a matter left unfinished from our Charlotte meeting about a year ago, a problem some of you may have experienced since that time to advantage. That is the question of weight and length of laps. At that time we reported variations and of course variation in length would affect variation in weight. Various means had been adopted to lessen variation in length of laps.

Mr. Crocker: My experience on that line is not new. There are variations in laps. That varies, I don't know, 1½ or one yard up to 2½ on same machine and I attribute that to moisture in cotton. Getting back to the necessity of humidifiers in picker room. In dry weather laps fluff up and get so large and cotton expands more and makes weak places in laps, and if you have

proper humidity the laps will be condensed and will not fluff up. During a long dry spell when we didn't have humidifiers our laps got down where we couldn't handle them and the superintendent said to sprinkle so laps would not be so large. We had the floor sprinklers and he told us to use it, and I said one morning—motes flying everywhere—so I would keep it wet during dry weather which just kept that expansion from coming.

Chairman: Did you test the length? Answer: We would take the lap and run off 10 yards and first start one yard, then to 10, and if you wet floor the laps was more uniform where you had moisture. You can condense the lap too much, but this was brought about by an excessive dry spell. We found the laps more uniform where we wet the floor and kept it condensed than where we did not.

Chairman: When a lap gets fluffy it stretches, and it stretches more on the outside than on the inside, and that makes it uneven.

Mr. Touchstone: Since our last meeting when this was left unfinished, I had some figures at that time, and in preparing those I took one lap on the relative humidity of my picker room—was running around 45—I cut the lap and I found 49 yards in the lap, carefully measured it off, and I found a variation of one ounce through the entire lap running from 11 to 12 ounces. The lowest one was 11

ounces and the highest was 12 ounces.

I did experiment considerably with the length of laps after our other discussion. In the meantime we installed the ball bearing, friction roll on one machine. I thought I would see what that would do. I took several measurements after that. I have 6 finishers. The other 5 finishers had no greater variations as to yardage than that one with the friction rolls. I could find no difference. I did that on three different days, and I found that the variation of my laps run around ¾ of a yard in the total length of laps.

Chairman: I believe at the Charlotte meeting some of us talked about letting laps run wild up to second drawing saying it would come all right again. Who has been doing that?

Mr. Crocker: I don't think that is possible.

Mr. Clark: Up in New England there is a mill that has run every night this past year. For production that mill never has run a lap over. That's at Salem, Mass., they make wide sheeting.

Mr. Campbell: At our No. 1 mill we took a notion about a year ago, after the Carder's meeting at Charlotte, to try Mr. Clark's idea in No. 1 mill. Our superintendent was very anxious that we cut out one process of drawing at No. 1 mill. We had two. We had a cotton mill at Woodruff running with one and getting on fine and we decided to

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try it. We were on 30 yarn—from 5½ roving, and when we did change the spinning room went all to pieces. Second day same way, spinning room went to pieces and breaking went from 62 to 65, and we put it back.

Mr. Anderson (Lexington, S. C.): You appear to get the same speed on 30s with one process drawing that was with two of same speed. Answer: Yes sir.

Mr. Digby: I would like to say that my speed differs.

Mr. Clark, Do you use leather or metallic rolls? Answer: Two mills are metallic and one leather. Question: Which gives best results, the leather or the metallic? Ans: I prefer the metallic.

Mr. A. D. Poole (Woodruff, S. C.): We tried one process but we have had to go back to two process drawing. Ours worked all right but tore up the spinning so, but the breaking strength went down and we had to go back on two process drawing.

Chairman: Let's get back to Cards. You might eliminate one process drawing but you can't eliminate cards.

Mr. Kersey: Don't you believe if manufacturers would pay more attention to humidifying—starting of process of goods through the mill and then down in weave rooms, in picker room for instance, if would get relative humidity in them and control it—would cut down yardage and make it more uniform?

Chairman: No doubt it would.

Mr. Touchstone: If they vary considerably, don't hesitate tell it. That is what we are here for to find out why we get variations, and, if possible, find a way of eliminating it. The question prior to that was to weigh the sliver from 10 cards after running about 2 hours and make report on that. Well that we did and the total of that was 47.9 grains of 10 pieces, weighed one yard from each card. The variation (I haven't got that laid down) but was round from 53 to 46. Taking the cards off the same cards, to 4 cards out of those 10 we stripped the cards out and there were 4 men, myself and 3 others, ready.

The result from 4 cards first 10 minutes, 42.4 gain. At the end of the second minute 46.4, 3rd minute 47.3, fourth 47.4, 5th 47.7. You see they are getting very close together after the third minute, sixth 48.4, seventh 48.7, eighth 48., ninth 48.5, tenth 48.3. So after four minutes you won't get a variation enough caused from stripping to affect it at any place. The figures I have are enough to convince me that it is not necessary after 3 to 4 minutes. Not customary with us to allow sliver to run on floor for 3 minutes.

Chairman: I had a test made on 4 cards for the various times from 1 to 10 minutes. On sliver the lowest was 33, the average minute was 34.06, and my average here shows that the 3 minutes they came up to 40.31. In 3 minutes time it was back to normal. Does anybody remember what the report was at Charlotte, how long it took it to get back to normal weight? Mr. Clark, this report of 8 to 10 minutes.

Mr. Touchstone: Three minutes was my report if I remember cor-

rectly. It seems Mr. Campbell made a report on that.

Mr. Campbell: 15 minutes was mine. I went for 15 minutes.

Chairman: Anybody else any figures on that—the time it takes cards to come back to normal after stripping?

Mr. Parris: I find about 4 minutes it takes to come back to normal. 4 minutes was my average.

Chairman: What is your cards per 10 hours? Answer: 120 No.

Chairman: I believe the reports presented here today, 3 to 4 minutes is the average time takes card to produce normal weight sliver. That may be encouraging to us. Mr. Campbell said it took 15 minutes but it seems that from 3 to 4 minutes ought to be the average amount of time required. Who has some reports for the stripping on 2 cards 2 hours after stripping. I guess the general run is from 3 to 4 hours for stripping, approximately 4 hours 3 times a day. Two hours would be half way between stripping variation.

Mr. Southern: I would like to ask a question. I tested out cards some time ago but some varied more than others after stripping. Some would feed and some would not. The sliver would vary 3 to 4 grains and I noticed it would not feed out on some and some would. I want to ask you was the feed out when it took 4 minutes to fill it in?

Mr. Touchstone: Strips never come out the feed in stripping the cards. You don't put the feed in. I don't know of any place where it is customary.

Mr. Touchstone: On a mill running around 30 yarn how many times a day do you strip cards—day of 10 hours?

Mr. Southern: I strip three times.

Mr. Crocker: I want to say I have worked on cards, grades of cotton and stripped at different times but I have never yet seen a system of card stripping that beat 2 a day. I am doing it still. 142 No. and 140 No. ten hours, making 30s and 40 yarn. We don't stop but twice a day. For the process of cleaning. I would like to stop again but am pushed for cards. We only strip twice and our breaking strength is around the average mill on 30s and 40s yarn. I am speaking of 1" cotton. I have experimented on stripping 3 and 4 times a day couldn't see any difference in breaking strength but a difference in cleaning of cotton. One of the prettiest, nicest, cleanest card yarn I have ever seen was the weakest yarn I ever knew. One of the dirtiest I ever saw was the strongest I ever knew.

Chairman: Have you tried anything like selecting a lot of sliver run from 4 to 5 hours after stripping and making yarn out of them?

Mr. Hunt: Does setting card have something to do with the strip? Can't you set cards to require more stripping?

Mr. Campbell: I have been experimenting. This brought up another item on the strength of yarn, etc. I believe the cards has a lot to do with strength of yarn I want some help on that line.

I am still experimenting on this. This setting of cards and speed of (Continued on Page 26)

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True, building in cold weather adds to the cost. In spite of this additional cost, we advised the client to build at once. The mill was completed six months earlier and in those six months saved many thousands of dollars over and above the increased cost of construction.

Lockwood-Greene service does not stop with the bare consideration of engineering problems. It goes far beyond and considers them in relation to the client's business as a whole. In this case, because of our long experience and knowledge of current business conditions, we were able to give advice that is not usually expected of an engineer.

In the Lockwood-Greene organization, men of broad business and financial experience, as well as architects and engineers, are at your service. Your problems are neither too large nor too small for Lockwood-Greene service. A letter will bring to you one of our representatives for consultation. Ask also for a copy of "Building with Foresight," an illustrated booklet of Lockwood-Greene work.



LOCKWOOD, GREENE & CO. ENGINEERS

EXECUTIVE OFFICES, 24 Federal Street, BOSTON

BOSTON	ATLANTA	CHICAGO	NEW YORK
DETROIT	CLEVELAND	CHARLOTTE	SPARTANBURG

Lockwood, Greene & Co. of Canada, Limited, Montreal

Those Present At Carders' Meeting

Among those who attended the meeting of the Carders' Division of the Southern Textile Association at Greenwood last week were:

Allen, J. H., Overseer Carding, Orr Mills, Anderson, S. C.
 Andrews, L. V., Martel Mills, Inc., Lexington, S. C.
 Becknell, W. W., Supt., Arkwright Mills, Spartanburg, S. C.
 Blair, Wm. G., Armstrong Cork & Insulating Co., Greenville, S. C.
 Browning, O. F., Carder, Greenwood Cotton Mills, Greenwood, S. C.
 Byars, Nathan, Woodruff Cotton Mills, Woodruff, S. C.
 Campbell, W. P., Carder, American Spinning Co., Greenville, S. C.
 Carter, G. W., Carder and Spinner, Anderson Cotton Mills, Anderson, S. C.
 Clark, David, Editor, Southern Textile Bulletin, Charlotte, N. C.
 Clark, P. F., Overseer Carding, Ware Shoals Mfg. Co., Ware Shoals, S. C.
 Cox, H. E., Overseer Carding, Gren-
 del Mills No. 1, Greenwood, S. C.
 Crow, Smith, Overseer Carding,
 Drayton Mills, Spartanburg, S. C.
 Darracott, J. F., Overseer Cloth
 Room, Union-Buffalo Mills, Union,
 S. C.
 Dickson, B. R., Supt., Greenwood
 Mill, Greenwood, S. C.
 Digby, T. J., Jr., Supt., Oakland Cot-
 ton Mill, Newberry, S. C.
 Dilling, Marshall, Supt., A. M.

Smyre Mfg. Co., Gastonia, N. C.
 Folk, Chris. E., U. S. Dept. of Agri-
 culture, Clemson College, S. C.
 Fowles, H. S., Carder, Arkwright
 Mills, Spartanburg, S. C.
 Hammong, J. F., Carder, Fountain
 Inn, S. C.
 Hamrick, C. P., Carder and Spinner,
 Pacific Mills, Columbia, S. C.
 Harris, J. B., Vice-Pres., Greenwood
 Cotton Mills, Greenwood, S. C.
 Hawkins, G. T., Night Carder, Alex-
 ander Mill, Forest City, N. C.
 Hightower, T. A., Supt., Addison
 Mills, Edgefield, S. C.
 Huff, J. H., Supt., Camperdown Mills,
 Greenville, S. C.
 Hunt, J. T., Carder, Unity Spinning
 Mills, LaGrange, Ga.
 Jolly, D. C., Overseer Carding, Addi-
 son Mills, Edgefield, S. C.
 Kersey, T. B., Asst. Supt., Unity
 Spinning Mill, LaGrange, Ga.
 Layton, R. H., Overseer Carding,
 Anderson Cotton Mills, Anderson,
 S. C.
 Long, W. H., Carder, Camperdown
 Mills, Greenville, S. C.
 Lybrand, S. R., Employment Mgr.,
 Union-Buffalo Mills, Union, S. C.
 Martin, L. C., Overseer Carding,
 Beaumont Mfg. Co., Spartanburg,
 S. C.
 Murdaugh, H. V., Jr., Apprentice,
 Pacific Mills, Columbia, S. C.
 Oates, C. L., Charlotte Mfg. Co.,
 Charlotte, N. C.
 Parrott, C. W., Carder and Spinner,
 Arcadia, S. C.

Patterson, H. C., Card Grinder,
 Union Mill, Union, S. C.
 Phillip, R. W., Associate Editor, Cot-
 ton, Atlanta, Ga.
 Pettit, C. W., Supt., Ninety-Six Mill,
 Ninety-Six, S. C.
 Poole, A. B., Second Hand Card
 Room, Woodruff Cotton Mill,
 Woodruff, S. C.
 Robert, C. R., Carder, Watts Mill,
 Laurens, S. C.
 Rush, C. C., Carder and Spinner, Red
 Bank Mill, Lexington, S. C.
 Southern, W. M., Carder, Lydia
 Mills, Clinton, S. C.
 Splawn, W. W., Overseer Spinning,
 Lydia Cotton Mills, Clinton, S. C.
 Still, H. E., Overseer Carding, Nine-
 ty-Six Mill, Ninety-Six, S. C.
 Stilwell, W. D., Carder, Mollohon
 Mfg. Co., Newberry, S. C.
 Sullivan, O. A., Asst. Supt., Gaffney
 Mfg. Co., Gaffney, S. C.
 Summer, E. S., Genl. Supt., Mollo-
 hon Mfg. Co., Newberry, S. C.
 Thomas, H. W., Overseer Weaving,
 Oakland Mill, Newberry, S. C.
 Thomason, Falls L., Salesman, N. Y.
 & N. J. Lubricant Co., Greenville,
 S. C.
 Thomason, L. W., N. Y. & N. J. Lu-
 bricant Co., Charlotte, N. C.
 Todd, F. C., Supt., Ruby Mills, Gas-
 tonia, N. C.
 Touchstone, S. G., Carder Pacific
 Mills, Columbia, S. C.
 Waits, E. G., Overseer Carding, Oak-
 land Cotton Mills, Newberry, S. C.
 Waits, W. K., Spinner, Greenwood
 Cotton Mills, Greenwood, S. C.
 Wiggins, Roy D., Orr Cotton Mills,
 Anderson, S. C.

Willis, H. H., Cotton Testing Dept.,
 Clemson College, S. C.
 Wilson, C. E., Overseer Carding,
 Union Mills, Union, S. C.

Glenn-Lowry Social Club Meet.

The Glenn-Lowry Social Club, composed of section men, second hands, overseers and the office force of the Glenn Lowry Manufacturing Company, Whitmire, S. C., held its regular monthly meeting on Friday of last week. The meeting was held in the Y. M. C. A., a bountiful dinner being served under the direction of C. H. Albrecht, chairman of the entertainment committee, who was assisted by Mrs. Herren, wife of B. H. Herren, master mechanic at Whitmire. Music was furnished by the mill orchestra during the evening.

Amusement was furnished by the weave room department, of which W. O. Holliday is overseer. The feature of this part of the program was music by a seven-piece orchestra from the weave room, and several songs by a quartet.

L. E. Beard then introduced Eugene S. Blease, mayor of Newberry, who delivered a very inspiring address.

At the business session, the following officers for the next six months were elected: President, E. E. Shedd, overseer of cloth room; vice-president, J. A. Campbell, overseer spinning; secretary-treasurer, J. C. Abrams, Jr., supply clerk, and assistant secretary, G. R. C. Gary, paymaster.

— NO H. & B. MACHINE HAS EVER OUTLIVED ITS USEFULNESS —



THE LIST OF USERS OF OUR MACHINERY REVEALS A DISTINGUISHED CLIENTELE WHOSE APPRECIATION OF *QUALITY* IS EXPRESSED IN THE PERFECT PERFORMANCE OF THEIR EQUIPMENT. SMOOTHNESS OF OPERATION AFTER MANY YEARS OF SERVICE AT A SURPRISINGLY LOW COST FOR MAINTENANCE HAS CONVINCED DISCRIMINATING MANUFACTURERS THAT IT PAYS TO BUY THE *BEST*.

H. & B. AMERICAN MACHINE COMPANY

— BUILDERS OF —

COTTON PREPARATORY & SPINNING MACHINERY

BOSTON OFFICE
200 DEVONSHIRE ST.

MAIN OFFICE AND WORKS
PAWTUCKET RHODE ISLAND

SOUTHERN OFFICE
ATLANTA TRUST CO. BLDG.
ATLANTA, GA.

High Point Loom Reed and Harness Company

One of the newest textile machinery firms in the South is the High Point Loom Reed and Harness Company, of High Point, N. C. The company was organized last August and has recently put its new plant into operation. All indications point to a very successful career for the company and it is already beginning to get a large business from Southern mills.

All of the machinery was purchased in England and it is of the newest and most approved type for the manufacture of loom reeds,



R. L. LEWIS,
President.

slasher combs and comb-backs.

The organization of the company is especially well fitted for manufacture of the various products cited above. The officers are not entering a new field, but bring to their new enterprise the experience and efficiency acquired through years of work along similar lines



J. LYMAN REDDING,
Secretary-Treasurer.

to that which they are now undertaking.

R. L. Lewis is president of the High Point Loom Reed and Harness Company. He was formerly sales manager of the National Brush

Company, but has been manufacturing loom reeds for the past several years. He is an experienced and capable executive and thoroughly understands the manufacture of the products to which his new plant is devoted.

J. P. Heatherly, vice-president of the company, has been manufacturing loom reeds for more than 20 years and is rated as one of the most efficient men in this field in the country.

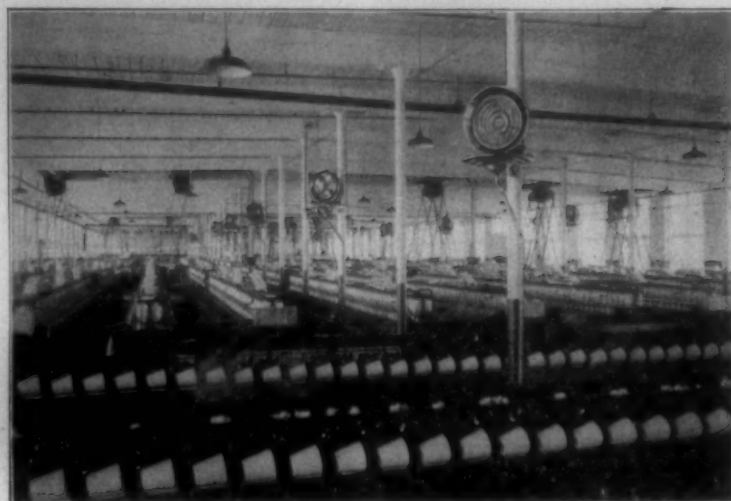
J. Lyman Redding, secretary and treasurer, is an experienced salesman and manufacturer. He was educated at Guilford College and the University of North Carolina and has had an unusually successful business career.

Cotton Congress Invited To Charlotte

Directors of the Carolinas Exposition Company, Charlotte, announce that invitations will shortly go out to the International Cotton Congress, to be held in Charlotte during the Carolinas Exposition and Textile Show in the Fall of 1925. Letters and handsome invitations will be mailed to all textile and cotton interests in this country and abroad. These invitations will bear the signatures of the Governor of North Carolina, officials of the Carolinas Exposition Company, officials of the City of Charlotte, Chamber of Commerce and other organizations. Among those organizations being invited to participate in the World's Cotton Congress are the American Cotton Manufacturers' Association, National Association of Manufacturers, W. Irving Bullard, American secretary World's Cotton Congress and treasurer of the National Association of Manufacturers, officials and directors of the New York, New Orleans and Liverpool Cotton Exchanges, Chester Howard, president, and the directors of the Co-operative Cotton Growers' Association of Atlanta, Lawrence McRae, president, and the directors of the North Carolina Cotton Growers' Association at Raleigh, Commissioners of Agriculture of all the cotton growing States, editors of farm and textile papers in the United States and foreign countries, State cotton manufacturing associations, as well as various other organizations and individuals.

The International Cotton Congress has been held twice in the South, once in Atlanta and once in New Orleans. In each case, Charlotte has been the first point visited by the delegates from foreign countries.

In the meantime, plans are going ahead for the staging of a big textile exposition in connection with the display of Carolina products in the Fall of 1926, and from the responses received in the past few days from a wide range of textile exhibitors, both North and South, the Carolinas Exposition Company is greatly encouraged over the prospects for the 1926 show.



An Installation of Bahnson Humidifiers

Bahnson Humidifiers:

Simple, single unit humidifiers, designed for reliable and economical use.

The fan on the machine insures a thorough mixing of the moisture with the air so that all parts of the room are humidified uniformly.

This, coupled with an accurate, dependable, automatic control which proportions the water fed to the machine in accordance with the need of the air in the room, produces an unexcelled performance.

An investigation will show you a performance so reliable, so economical and productive of saving that you will insist on BAHNSON Humidifiers for your mill

Literature on Request

The BAHNSON Company
Humidification Engineers

Winston-Salem, N. C. New York Office: 437 Fifth Avenue



No more slow-down at sun-down—



Picture shows cotton looms under Work-Light in plant of the Home Cotton Mills, St. Louis, Mo. This concern has used Work-Light for more than 10 years. Its installation comprises more than 100 lamps.

SILK mills working two shifts. Night work common in rubber industry. Cotton mills 18 per cent. busier. Automobile plants and machine shops speeding up!

Orders to fill. Schedules to meet. Production must peak in mid-winter, the time of shortest days and longest nights. Do you get full eight-hour production by working eight hours at night?

To take less is needless waste. Work-Light has proven that. Production losses due to dark days and long nights simply do not happen where Work-Light is installed.

Find out now what your plant shows. Compare its performance with similar plants, Work-Light equipped.*

1. *Textile Mill*—Has run two shifts under Work-Light for eight years, with day and night output equal. New plant planned in 1917 never required.

2. *Auto Body Plant*—Saved \$20,000 in year on overtime and extra help in finishing department. Work-Light system cost \$6,000.

3. *Hosiery Mill*—Knitters' production gained 4.2 per cent., loopers 4 per cent., under Work-Light. Same employees, same machines, same materials.

4. *Auto Hardware Plant*—Improved output all departments. With 600 punch presses, no accident due to light in 3 years Work-Light has been used.

Certainly not just a different kind of lamp, but a different kind of light! Ninety per cent. of Work-Light is yellow-green rays. It provides greater see-ability for your wattage than any other light.

Send for the Work-Light booklet—or special folder covering any operation you wish to improve. Cooper Hewitt Electric Co., 91 River St., Hoboken, N. J.

* Manufacturers' names furnished upon request.

COOPER HEWITT

Work-Light

55A © C. H. E. Co., 1924

Carding and Spinning

By George M. Ivey

Copy Revised for Third Edition.

(Continued from last week)

Strength of Yarn.—At the Georgia School of Technology elaborate tests were recently made on many samples of yarn, varying the twist on either side of the standard. The result showed conclusively that yarn is strongest with the standard twist. If more than standard is put in, except in very short cotton, the yarn is not strengthened but weakened.

The following table, which is considered the standard, is taken from Draper's Catalogue, and shows the result obtained by testing samples from 225 representative mills. There is also what is known as the English standard, but it is so elastic and unreliable that we do not publish it.

Breaking Strength of Warp Yarn

Pounds to Break One Skein of 120 Yards.

No. of Yarn	Breaking Strength	No. of Yarn	Breaking Strength	No. of Yarn	Breaking Strength	No. of Yarn	Breaking Strength	No. of Yarn	Breaking Strength
1	—	15	115.1	29	59.2	43	42.2	57	33.4
2	—	16	108.4	30	57.3	44	41.4	58	32.8
3	530.0	17	102.5	31	55.6	45	40.7	59	32.2
4	410.0	18	97.3	32	54.0	46	40.0	60	31.7
5	330.0	19	92.6	33	52.6	47	39.3	61	31.3
6	275.0	20	88.3	34	51.2	48	38.6	62	30.8
7	237.6	21	83.8	35	50.0	49	37.9	63	30.4
8	209.0	22	79.7	36	48.7	50	37.3	64	30.0
9	186.5	23	75.9	37	47.6	51	36.6	65	29.6
10	168.7	24	72.4	38	46.5	52	36.1	66	29.2
11	154.1	25	69.2	39	45.5	53	35.5	67	28.8
12	142.0	26	66.3	40	44.6	54	34.9	68	28.5
13	131.5	27	63.6	41	43.8	55	34.4	69	28.2
14	122.8	28	61.3	42	43.0	56	33.8	70	27.8

TROUBLES IN THE SPINNING ROOM

Weak Yarn.—There is only one trouble that is more frequent than this, and that is the general one of bad-running work. Weak yarn may result from weak cotton. In America, we handle very little except American cotton, and the strength of the many varieties is not studied as closely as it is in England. However, it is no unusual thing to find a mill spinning yarn that is too fine for the cotton used. It is absurd to expect number 40's made from ordinary cotton to break at the standard weight. For warp yarn we think the limit has been reached where 30's is made from ordinary upland cotton. For many purposes, strength is not essential, and we know of number 42's filling being successfully spun from South Carolina cotton. Of course it is customary for the spinner to blame the carder for uneven roving, and what is written under that head is largely applicable here. Even with good roving it is very easy to make weak yarn.

Excessive Draft.—For warp yarn, we do not think that the draft should exceed 12, or at most 13. We are of course aware that this draft is often exceeded, but for the best results we should confine it to this limit. For filling, where strength is not so essential, 14 and even higher may be drawn. This is assuming that the roving is double. With single roving the draft should be less than 10. A few years ago it was a common argument among spinners as to which was the more desirable, the single or double roving. We now hear very little about it, and it is almost universally conceded that it is much better to have it double, although it will cost more. This does not apply to coarse yarns, for they are sufficiently strong to stand high speed and need no special doubling to increase their strength.

Excessive Speed.—We have spoken of this at some length on a previous page, and will only add that it not only keeps the spinners working harder, but also by undue chafing against the traveler and separator weakens the yarn. In mills where they make sewing thread the ideas of speed are very conservative.

Worn travelers also have a bad effect on the yarn. This is especially true where the yarn is rather coarse. On fine yarn, the travelers break just as soon as they are worn, and consequently need but little extension. On medium or coarse work, the travelers should be changed at regular intervals. For ordinary numbers, this should be done every three weeks. The spinners should not be expected to do this, as they have neither the time nor the judgment necessary. When it is done it should be under the supervision of a competent man. Many rings have been ruined by breaking off the travelers with the top rollers.

In general terms, it may be said that anything that tends to make the work run bad will weaken the yarns, for the cause which makes the end break will not break it every time, but will weaken it many times when it does not break. When it does break, and is pieced up by the spinner, it is seldom as strong at the splice as it is at other points. Assuming that the roving is good, we believe that the most prolific source of bad running work is the top rollers. They may be either worn, fluted, dry, or choked with waste. It is true that it costs something to cover rollers, but it is no economy to use one after it has caused an end to break. The steel rollers should be frequently oiled. They run at such different speeds that it is impossible to give a rule which will apply to all conditions. The ends of

the top rollers need not be oiled, after the frame has been run a few months, except when a new one has been put on. They need but little oil, and get that when the spinner is cleaning them with oily fingers. The saddles should be oiled either with the well-known tin tube and sponge, or with a Thompson can with a very small opening. We are sure a great many rollers are spoiled, and a great deal of bad work results from the careless use of oil. The rollers should be cleaned twice daily. With modern frames, where the bearings extend above the cap bar, they are much easier to keep clean than formerly. The spindles should be oiled every two weeks. If we were sure they were all oiled, once a month, would be sufficient, but for fear some are neglected it is best to be on the safe side. This is an unpleasant job, and it is a good plan to have a box put on rollers, so that the boys can sit down and roll the box along as they oil. They will then be comfortable, and not near so apt to neglect the work.

We believe that a large proportion of spindles are improperly set. The machine erectors usually run the ring-rail half up and set the spindles in the center. This is not the proper way. They should first be set when the rail is near the bottom. It should then run to the top, and if the spindle is not in the center, it is proof that it is not plumb, and should be tapered up. After this it should be again run down and see if the rings are still in the center. Spindles and rings should be set once a year without fail.

Slack bands make a great deal of trouble for the spinner, as well as for the weaver. Rovings bands do not stretch as much as yarn bands, and are much better. The second hand or overseer should go over the bands occasionally and see if they are too loose. They need attention especially after several days of very damp weather, which draws them tight, and when they dry out many are too slack.

A worn guide, or one that is not over the center of the spindle, will make bad work. They should be set while the spindle is running, as modern spindles are in a slightly different position when running and when standing. It is well to notice the spindles carefully. One which vibrates is apt to cause trouble. The step may need adjusting, the bolster may be broken, or the spindle itself bent. A bad ring may be used for some time, especially on coarse work, but it will soon ruin enough travelers to pay for another one. Besides this, every time a traveler breaks some waste is made, and a weak place is made in the yarn. Rings should be cleaned occasionally. Some overseers claim that the traveler bears only on a very small part of the ring and the traveler itself will keep it clean. This is a mistake, and for thorough cleaning the rail should be put into a box of concentrated lye. If practicable, let them remain in the bath all night.

Cut Yarn.—This might be classed under the head of uneven yarn, as the terms are almost synonymous. If it is not known on which frame the yarn is spun, examine all draft gears, as one or more teeth may be broken out. Sometimes the gears are not set deep enough, and slip a tooth occasionally. Where the gears are worn, they are liable to be put too deep in gear, which causes the rolls to jump or vibrate. On old frames the squares in the end of roller may be worn so as to slip occasionally. This is only on back rollers, for if it occurs on the front roller, the trouble will be apparent at once. A piece of traveler or part of a broken tooth may accidentally, or purposely, find its way between the teeth of the draft gears, causing the roller to jump at this point.

Bunchy or Lumpy Yarn.—This may be caused by bad piecing. Either the scavenger rollers or the clearer boards may get too full, and the waste drop down on the roving. This is especially likely to happen when spinning long cotton, as the rollers are then farther apart. The frames should be stopped while the ceiling is being brushed down. In many mills the frames are covered while this is done. Weight hooks resting on the back boards will make bunchy yarn. Occasionally a front roller is cracked. This will make a thick and a thin place at every revolution. A great deal of lumpy yarn is made by spinners when wiping off the thread. This seems to be a necessary evil, but careful spinners will greatly diminish it. They should not be allowed to fan off with their aprons or to blow off the lint through a bobbin.

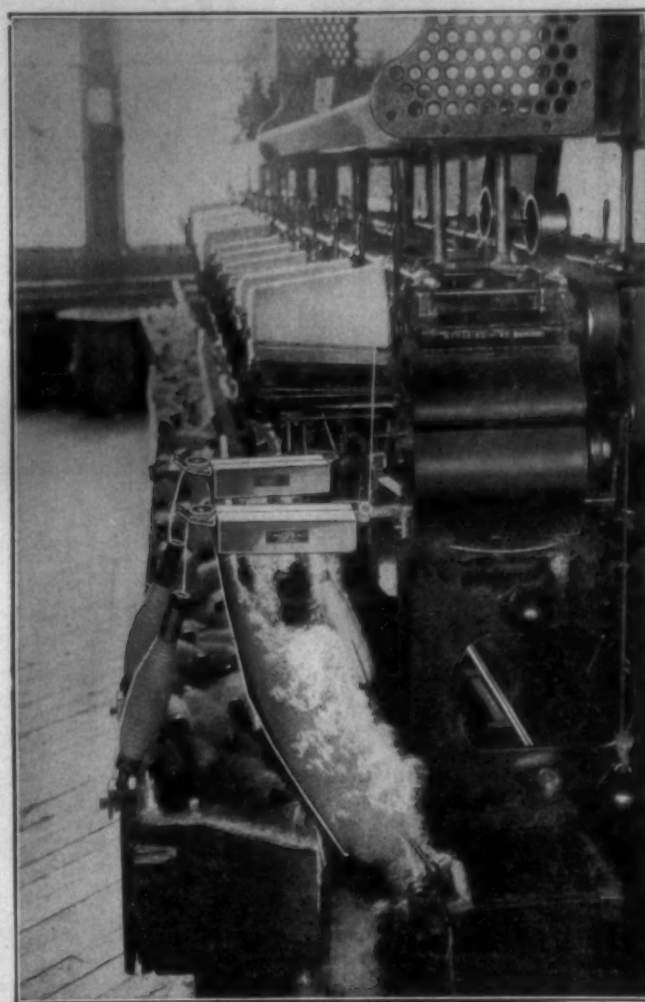
Spiral or Corkscrew Yarn.—See this under twistors.

Ends Running Bad.—A spinner may observe all the foregoing points, and yet the ends run bad. What, then, is to be done? The numbers may be too light; size 16 or more bobbins per day of each kind of yarn; have the carder give you each day 8 roving bobbins, and size the yarn from these in addition to the bobbins taken at random. This will enable the spinner to know what to expect, and a careful record should be kept of these numbers. Do not jump at conclusions because one set of bobbins is light. Weigh a large number before changing the draft gear, but if too much is light or heavy, do not hesitate to make a change. There is a foolish idea in some mill that all changes of this character should be made in the card-room.

There may be insufficient moisture in the room, or electricity may be giving trouble. Warming the air moistens, a sprinkler will do a great deal of good. Spinners must bear in mind that warm air will hold in suspension much more moisture than cold air.

Bad work may be caused by a bale or several bales of unusually short or bad cotton. Find out how much of this there is. If there is only a little, a few extra hands will enable the room to pull through. If there is a good deal, put in more twist or reduce the speed, or both. If it is a spinning mill only, the speed may be easily reduced at the engine.

(Continued Next Week)



Mr. Knitter—Do You Realize Your Loss From Waste?

How often do your knitting machines stop because of slubs—heavy and light spots in the yarn?

Do you know the loss of production from this cause? Do you know the amount in dollars and cents—that is, lost in waste that is thrown under the cutter's table due to cutting out holes through the use of imperfect yarn?

Do you realize the difference in production between running good yarn and bad yarn? With labor high, even the same percentage of waste in manufacturing becomes a heavier charge against your costs. Are you taking the best means of meeting this situation?

The successful men in the production of knitted textiles are those who, under the pressure of high prices, make use of the most effective methods of avoiding waste in manufacturing operations.

A Knitter can cut down waste in his plant and increase his production by using the best grade of yarn—that is, free as possible from imperfections. If a lower grade contains even one more imperfection to the mile of 30/1, it means fourteen more imperfections to the pound—fourteen thousand more imperfections to the thousand pounds; one thousand pounds is a small quantity to the user of yarn. Fourteen more imperfections is a severe handicap in the manufacture of any product.

You can positively cut down the waste in production by equipping your winder with the Eclipse Yarn Cleaning Device. By using this cleaner, any grade of carded yarn can be made a ninety per cent better knitting yarn. You cannot appreciate this fact until after you have used the Eclipse Yarn Cleaner.

If you knit direct from cones, take this vital matter up with your "spinner"—he can deliver you a better yarn.

Ask us to send you full information—or better still—we will send our representative to give you an actual demonstration upon your request. When you write, please mention the type of winder or spooler you use.

Eclipse Textile Devices, Inc.

Elmira, N. Y.

Makers of

Automatic Yarn Cleaner, Automatic Stop Motion, Yarn Tension Device
Eclipse Van Ness Dyeing Machine

SOUTHERN TEXTILE BULLETIN

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Member of Associated Business Papers, Inc.

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DAVID CLARK
D. H. HILL, JR.
JUNIOUS M. SMITH

Managing Editor
Associate Editor
Business Manager

SUBSCRIPTION

One year, payable in advance \$2.00
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Contributions on subjects pertaining to cotton, its manufacture and distribution, are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

ADVERTISING

Advertising rates furnished upon application.
Address all communications and make all drafts, checks and money orders payable to Clark Publishing Company, Charlotte, N. C.

The Yarn Situation

THE somewhat active trade that developed in the yarn markets a few weeks ago has subsided. The market is again dull and listless, and buyers are making strenuous efforts to beat down prices. As we see, there is no particular cause for alarm in the present situation, that is if it is met intelligently. The usual period of year-end dullness is at hand. The approach of the holidays and inventory period always makes for poor business.

Buyers are apparently not as confident of cotton prices as they were some time back. The last Government report is regarded as being low when contrasted with the amount of cotton actually ginned as shown in the last spinning report. In other words, the Government estimate, many people think, is not in keeping with the amount of cotton already ginned. The cotton situation, however, is alarming as the present crop and carry-over will not prove burdensome in the face of anything like a normal demand for cotton and yarns.

Much of the buyers' hesitancy at present is due to the experience that they have had in the past. They have found that during a period of depression, many spinners are willing to cut prices in order to get business. That is what is in the minds of most buyers now. It is the real basis of their belief in lower prices.

During the past six months, the yarn spinners of the South have held production down in keeping with demand. They have gradually made a market for their products that at least shows them prices that represent replacement values. They have handled the situation so well that the manufacturing margin on yarns is now considerably higher than it was a few months ago, in spite of the fact that both yarn and

cotton prices are lower than they were last year.

The benefit of the prolonged curtailment last summer will be entirely wiped out if the spinners force yarns on the market too rapidly after the first of the year. Already some yarn dealers are expressing the opinion that there will be an overproduction of yarns in January. If there is, prices will most certainly suffer.

The present inactivity in the yarn markets will prove only a temporary condition if the spinners do not lose sight of the fact that a few "weak sisters" can break prices down. There will be no quantity buying of yarns until after the first of the year and if production is kept within reasonable bounds, there is no reason to become unduly agitated about the lack of buying now.

We believe that the potential market for yarns is extremely good. Buyers have not satisfied their requirements in anything like a normal way. Stocks of yarns are low. If an accumulation is prevented, when the buyers are ready to operate again, they will have to pay the spinners a fair price.

An Automatic Recommendation

SOME weeks ago we published a Want Ad for a large mill, an advertisement that was received late in the week and consequently did not appear in our regular Want Advertisement Department.

There were a number of replies to the advertisement, as a matter of course. The most pleasing feature of the little transaction, however, came to light later when we received a letter from the mill in question. An extract from the letter said:

"We have received several applications and the fact that the applicants found the advertisement

where it was proves that they read the Southern Textile Bulletin regularly and thoroughly, which we consider one of the best recommendations that an overseer or second hand can have."

So there you are. The man who reads his textile paper regularly and thoroughly has a better chance to land a job than the man who doesn't. He automatically recommends himself for serious consideration.

Of course this is just one instance that illustrates the value of the trade paper. The man who signed the above letter is an executive in a large mill and in common with most men in like positions, he prefers to hire brains whenever he can, regardless of whether he is filling a large job or a small one.

In another column on this page we are publishing a letter from a mill superintendent who has lived long enough to see the marked change that has taken place in the superintendents and overseers in Southern mills in recent years. He attributes the better conditions mainly to study and the work of the Southern Textile Association. The superintendent or overseers who intelligently reads his trade paper is constantly improving his knowledge of the business. In other words, he is studying. He is the man who gets a chance to move ahead.

Getting back to that letter again, it carried a threefold meaning. First, that the man who reads the Southern Textile Bulletin "regularly and thoroughly" finds it a recommendation when applying for a position. Second, it reflects something of the standing which our publication enjoys among Southern mill executives. Third, it incidentally points out a mighty good place when you need a want advertisement.

The superintendent, overseer or second hand who does not regularly read his textile paper is standing on the sidewalk watching the parade go by.

Think it over.

An Old-Timer Speaks

Editor:

I read with much interest your editorial of December 4 and will say that I well remember when overseers and superintendents changed places every year. I was working as second hand in spinning in those days and was competent to run a spinning room, but as you say we never knew a mill in those days that would promote a man. Their usual excuse was that he was too young. If a man wasn't as old as 35, he could hardly get a place as overseer.

Another reason for so many changes in the old days was that we did not have the textile schools to train the men as we have now. You hardly ever saw a superintendent or overseer who was willing to experiment for better running work and the men of those days would not let each other on to what they knew. Every man thought he knew more than the other fellow. They did not have the Carders' and Spin-

ners' Sectional Meetings that we have now where all get together and tell what they know.

When there was trouble in the different rooms, each man would blame the other just as you pointed out. They would not get together and each share the blame and try to remedy conditions and keep the help from knowing of their dissension. Instead each man would criticize the other to the help and when one overseer would leave he would have the sympathy of the majority of the workers. On the next job he took he would toll off all the help he could get to follow him. This kept the help running from place to place. I remember I followed one overseer for five years and worked second hand for him in each place. Everywhere he went, the second hand on the job would lose his place regardless of how good he was, as he was counted as the other fellow's man and the help that would follow him would always expect more out of him than the company would stand for.

Even now you will still find some of these old codgers at some mills. They state that there is no good in textile meetings and that the young men trained in the textile schools are no good and all such foolish statements as that.

Let me say this: I am 46 years old and an overseer, and if I had not studied at these textile schools and kept myself always open to conviction and always told the other man what I know and what I have learned from the schools and their students, I would still be sitting on a back seat with some of the other fellows.

It has been said of me that I will not stick to a job long. The cause for this is that the habit of moving often was created in me by my associates when I was a young man running from pillar to post. In the past few years I have gotten out of that habit and still study the things brought up at the textile meetings and experiment with their ideas every chance I get. I am a poor scholar, as I never had much chance for school, except what I learned in the textile schools.

I hope this letter will be interesting to some of the old heads who still occupy the back seats and criticize the textile students and the Southern Textile Association and everything else that tends to improve the textile industry.

A Subscriber.

Bride Of 13 Must Continue In School

Providence, R. I.—Mrs. Mary Cecilia Carrigan, 13-year old grammar school pupil and bride of ten days, must continue to attend school until the end of her 15th year, according to the ruling of Truant Officer James R. Cannon, who has served notice to this effect upon the girl's husband, John Thomas Carrigan, 18, of 250 Eddy st.

It was explained to Carrigan that the Child Labor Law provides penalties for any person failing to send to school a child of school age dependent upon him even though the child may be his wife.

FRANK B. KENNEY
President

CLARENCE R. HOWE,
Vice President

MARSHALL F. CUMMINGS,
Treasurer

T. C. Entwistle Company

Lowell, Massachusetts, U. S. A.

Designers and Builders

Warping and Beaming Machinery

Slasher Warpers,

Balling Machines,

Doubling Machines,

Ball Warpers,

Beaming Machines,

Card Grinders,

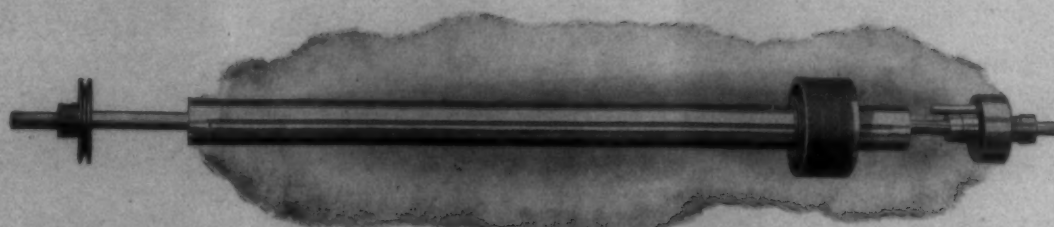
Automatic Lint Cleaners, Expansion Combs,

Section Beams,

Indicating Clocks,

Warper Creels,

Wood Rolls,



TRAVERSE WHEEL GRINDER



ROLL GRINDER

NEW GRINDERS

When you need new Grinders, buy "THE ENTWISTLE" and enjoy the satisfaction of the Highest Quality perfectly balanced Grinders obtainable at any price in this or any Country.

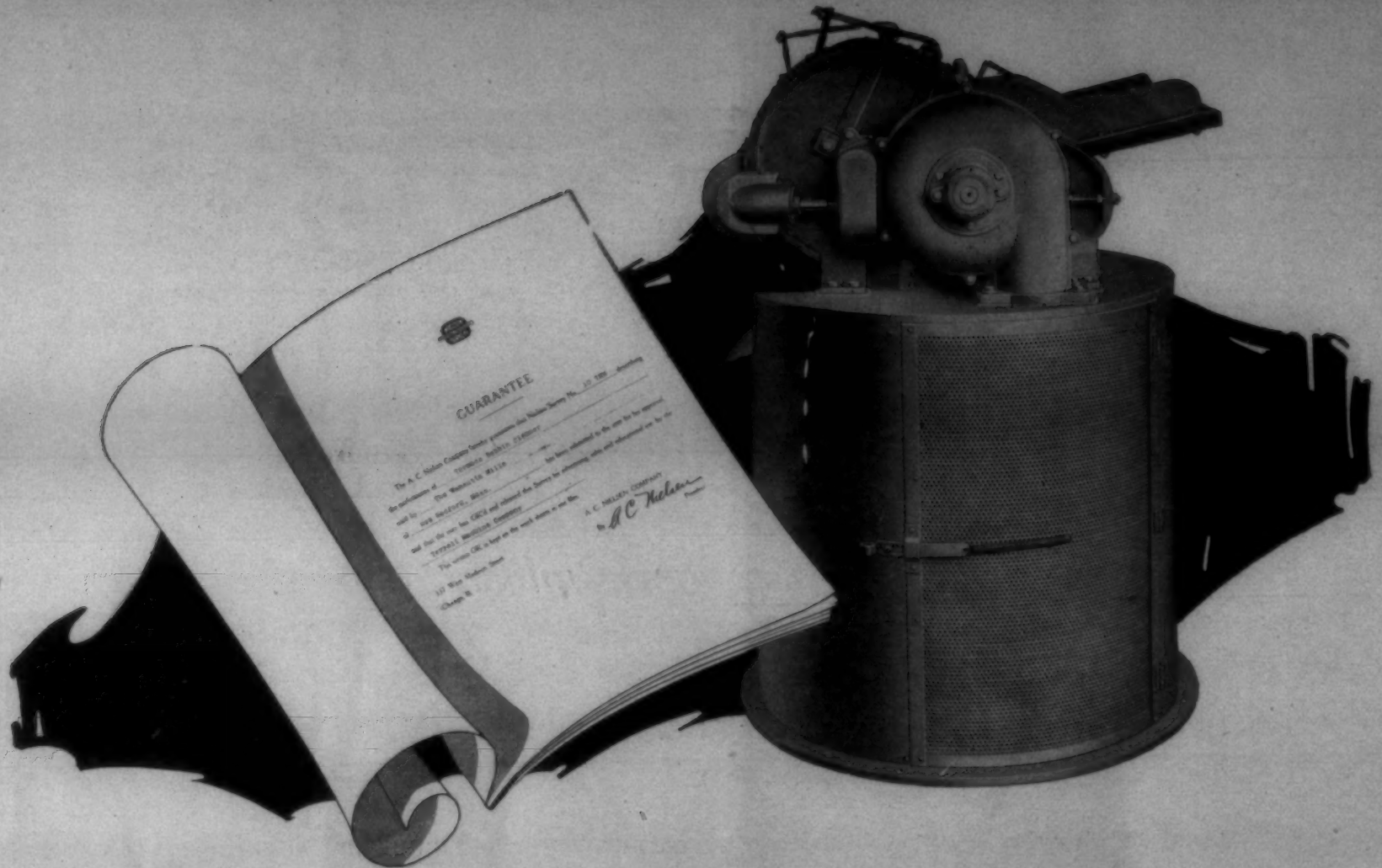
They cost you no more to start and a lot less in the long run.

REPAIRS

When you need to repair, WE CAN HELP YOU! whether our make or any other, by making your old Grinders nearly as good as new.

JUST SEND THEM ALONG!

We have all the details for Grinders for every make of Cotton Cards.



Saves a Mill \$2,275⁰³

This is the actual annual net saving accomplished by a Termaco roving bobbin cleaner for a mill where the Termaco is operated at about one-half its capacity.

Send for Nielsen Survey No. 10 TMM. The facts contained in it were compiled by an engineering organization which has made a thorough investigation of the Termaco in actual mill operation. It gives figures on the saving in roving waste effected by the Termaco, the saving resulting from not cutting the staple, the saving in bobbins, and other facts you will find valuable to know.

Nielsen Survey No. 10 TMM will be sent you entirely without the slightest obligation on your part. Send for your copy today.

The TERMACO

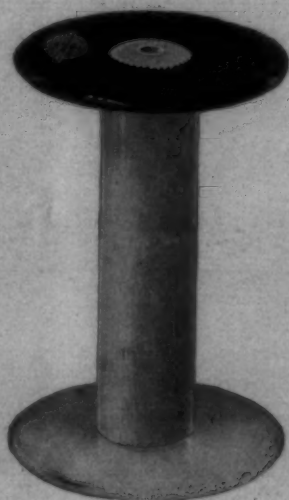
ROVING BOBBIN CLEANER

The TERRELL MACHINE COMPANY, Inc. CHARLOTTE, N.C.

as to SPOOLS

Unconditional Guarantee

Lestershire Vulcanized Fibre Spools are guaranteed unconditionally.



They have
an important bearing on
finished production

Spooling and warping have a vital bearing on the quality of your finished fabrics. But because these are initial operations they are seldom viewed in proper perspective.

There is only one type of spools which put yarn in the best possible shape—and that stands daily smashing and banging without splintering, cracking or chipping.

These unusual spools are

Lestershire Vulcanized Fibre Spools

These spools are money-savers on replacement expense alone. Their Vulcanized toughness is proof against long years of use, the heads being unconditionally guaranteed against splintering, fraying, chipping or coming off. This feature is a preventative, also, of yarn wastes which sometimes run into a loss of thousands of dollars.

Lestershire Vulcanized Fibre Spools increase the yardage on your spools by about 10%. Kinks and knots due to spools are conspicuous by their absence. By eliminating broken ends on warpers these spools add 20% to 30% to your warper production and extra quality and increased production in the weave room.

Are your employees spool-timid from stopping defective spools? Lestershire Vulcanized Fibre Spools prevent injuries through their enduring smoothness.

Would you like to know how Lestershire Vulcanized Fibre Spools can raise the efficiency of your production while lowering spool costs? Write us for the facts.

LESTERSHIRE SPOOL & MFG. CO.

Also Manufacturers of High Grade Wooden Spools of Every Description

140 Baldwin Street
Johnson City, N. Y.

Southern Office
519 Johnston Bldg., Charlotte, N. C.

Economical to Run and A Dividend-Earner

The Mill with Northrop Looms has nothing to fear from the Weaving Equipment of its Competitors.

A Weaver can run more Northrop Looms than any other loom ever produced. Mill Records prove it.

If this interests you, Let's Talk It Over.

DRAPER CORPORATION

Southern Office Atlanta Georgia

Hopedale Massachusetts

Personal News

F. L. Ferguson, of Hickory, N. C., is now located at Granite Falls, N. C.

John W. Pierson has resigned as superintendent of the Danville Knitting Mills, Bon Air, Ala.

J. G. Hackett has resigned as president of the Grier Cotton Mills, North Wilkesboro, N. C.

S. T. Tomlinson has been elected president of the Grier Cotton Mills, North Wilkesboro, N. C.

A. Arnold is now superintendent of the Nebel Knitting Company, Charlotte, N. C.

E. G. McIver has succeeded W. A. Erwin, Jr., as manager of the Erwin Mill No. 2, Duke, N. C.

James T. Barker, Jr., has accepted the position of superintendent of the Green River Manufacturing Company, Tuxedo, N. C.

T. A. Finley has accepted the position of superintendent of the Grier Cotton Mills, North Wilkesboro, N. C.

C. W. Rale is now superintendent of the Stowe Spinning Company, Belmont, N. C.

W. H. Brock has succeeded E. E. Hagan as superintendent of the Standard Knitting Mills, Burlington, N. C.

M. H. Hayes has succeeded William McCloud as superintendent of the Cherryville Manufacturing Co., Cherryville, N. C.

D. O. Carpenter, of Bessemer City, N. C., has become overseer spinning at the Thrift Manufacturing Company, Paw Creek, N. C.

J. P. Burke has been promoted to master mechanic at the Buck Creek Cotton Mills, Siluria, Ala., succeeding the late W. L. Cooper.

O. L. Dunn has resigned as superintendent of the Danville Knitting Mills, Bon Air, Ala., to accept a similar position with the Avondale Mills, Sylacauga, Ala.

Allen Joins Gaston Textile Association.

Gastonia, N. C.—Fred M. Allen, for eight years secretary of the local Chamber of Commerce, has resigned to accept a position as secretary and treasurer of the Gaston County Textile Manufacturers' Association.

Edwin Howard Takes New Position.

Edwin Howard, of Greenville, S. C., who for many years has been Southern representative for the Mason Machine Works, of Taunton, Mass., has resigned that position to become Southern agent for the Woonsocket Machine and Press Co., Woonsocket, R. I., Fales & Jenks Machine Co., and Easton & Burnham Machine Co., both of Pawtucket, R. I.

William Lee will be associated with Mr. Howard as sales agent.

Mr. Howard is one of the best known machinery agents in the Southern textile field and the news of his new connection will be received with a great deal of interest by his friends throughout the industry.

He will have quarters at Rooms 1400 and 1401, Woodside Building, Greenville.

L. D. Lawson Dead

Liberty, S. C.—Lawson Lafayette Lackey, 43, superintendent of Easley Mills No. 2, at Liberty, died at his home here about 2:30 o'clock Sunday.

The deceased was a native of Lincoln, N. C., but a South Carolinian by adoption, having lived in Easley sixteen years before moving to Liberty five years ago, a well known and highly esteemed citizen of the section. He was a member of the Liberty Methodist church, and was superintendent of the village Sunday school for some four years.

He was twice married, the first wife being Miss Ora Epps, of Easley, the second, Miss Ethel Leslie, of near Easley, who with a ten months' old baby boy, and three children of the first marriage, Misses Ethel and Clarice Lackey, high school girls, and Floyd Lackey, age 7 years, survive him.

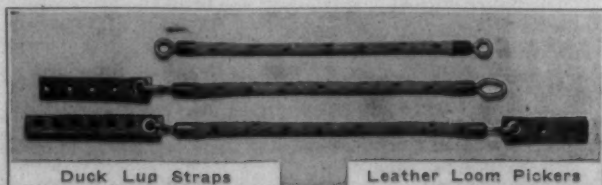
Funeral services were held from the Methodist church, conducted by the pastor, Rev. E. W. Mason, at 3:30 o'clock Monday afternoon. The Easley Masonic Lodge, of which Mr. Lackey was a member, had charge of the burial rites at the graveside.

Joseph L. Davidson Co.

Established 1889

Designing Card Stamping Repeating
FOR ALL TEXTILE FABRICS

2525 N. Second St., Philadelphia, Pa.



E. H. JACOBS MFG. CO., Danielson, Conn. Established 1869
Southern Factory Branch, Charlotte, N. C.

Cotton Bleachers

Your Selling Agent

wants durable goods.

They mean re-orders

and building up Good-will.

Tests will show that

Solozone-bleached goods

Are strongest and stay so.

Combine this with a

Permanent white and softness

To produce unequalled goods.

Bleaching advice free.

The Roessler & Hasslacher Chemical Co.

709 Sixth Ave.

NEW YORK CITY

Leno And Marquisette Weaving

Our leno doups for weaving marquissettes and fancy leno weaves are universally accepted as the only satisfactory solution of leno weaving.

In fact, by using our doups, any weave room with dobby looms can make a leno stripe as easily and at as low cost as any ordinary fancy fabric and, that, too, without any extra attachments to the loom whatever—no, not even a jumper or a slackener attachment is required.

STEEL HEDDLE MFG. CO.

GREENVILLE

PHILADELPHIA

PROVIDENCE

"Duplex" Loom
Harness—complete
Frames and
Heddles fully
assembled

Selvage Harness
Leno Doups
Harness Frames
Jacquard Heddles

SOUTHERN PLANT

Greenville, S. C.

HAMPTON SMITH

Southern Manager

Drop Wires
Nickel-Plated
Copper-Plated
Plain Finish
Improved
Loom Reeds
Leno Reeds
Lease Reeds
Combs

MILL NEWS ITEMS OF INTEREST

Spartanburg, S. C.—The Star Hosiery Mills will install 100 additional knitting machines.

Gastonia, N. C.—The Loray plant of the Manville-Jenckes Company is to erect ten additional homes for their employees.

Summerville, Ga.—The Summer-ville Cotton Mills have placed an order with the American Moistening Company, Boston, for humidifying equipment.

Woodstock, Ga.—The Little River Mills have placed an order for humidifying equipment with the American Moistening Company, Boston.

Goldville, S. C.—The Joanna Mills have placed a large repeat order for humidifying equipment with the American Moistening Company, Boston.

Shelby, N. C.—The Shelby Cotton Mills have let contract to Michael & Bivens, Gastonia, N. C., for installing switchboards, reorganization and installation of motors and lighting system.

Chattanooga, Tenn.—The Smith Hosiery Mills will construct an addition to treble the capacity of their plant. It will be 50x270 feet, three stories, concrete construction, and cost about \$300,000.

Wilson, N. C.—Secretary Beamon, of the local Chamber of Commerce, at a recent meeting of business men, announced the plans of a large factory manufacturing cotton goods to locate a branch factory here, if the citizens will raise \$500,000 to add to the company's \$750,000.

Chattanooga, Tenn.—The Dixie Spinning Mills, recently reported as to build an addition to their mill, have let contract to T. C. Thompson Bros., for construction of an addition adjoining their present plant. It will be 100x107 feet and will have 3,000 spindles.

Valdese, N. C.—The Waldensian Weavers, Inc., has been organized here by A. M. Kistler, C. A. Spencer and R. T. Claywell, all of Morganton, and Francis Garrou, of Valdese. The company has purchased 80 looms and will establish a plant for the manufacture of artificial silk specialties.

Shelby, N. C.—The contract for the construction of the Ora Mill at Shelby was let to W. M. Welch, of Greenville, and work will begin within the near future. The amount of the Welch bid was not made public.

The Ora Mill will contain 6,000 spindles and will be a weave mill of the standard type. In addition to the mill building itself, Mr. Welch will also build several warehouses and other buildings for the mill at Shelby.

THE FARISH COMPANY

COMMISSION MERCHANTS

100 WORTH STREET

NEW YORK



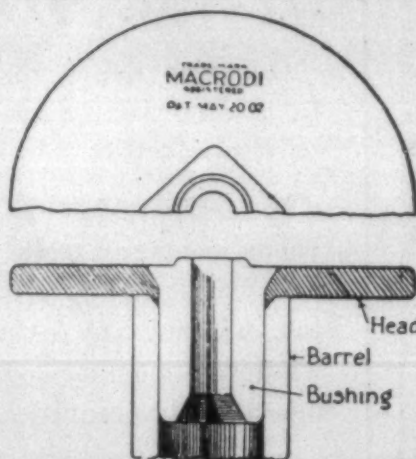
To Our Friends And Customers—

With the approach of Yuletide we express to you our gratitude for our many years of pleasant business relations. Our efforts to serve you have their ample reward in the doing and your appreciation assures our Christmas happiness. With a spirit of thankfulness for our past pleasant relations, believing they will develop into a broader understanding with the coming years, we wish you a full measure of Health, Happiness and prosperity.

Cordially yours,

Dary Ring Traveler Company

Taunton, Mass.



The Macrodi

FIBRE HEAD
WARP SPOOL

after fourteen years of the hardest mill use has demonstrated that it is

Durable—Economical

Write for particulars of the added traverse with corresponding increase in yardage—an important feature of this spool.

Prompt deliveries in two to three weeks after receipt of order.

MACRODI FIBRE CO.
Woonsocket, Rhode Island

Members American Society Landscape Architects

E. S. DRAPER

11 E. Fifth St.
CHARLOTTE, N. C.

101 Marietta Bldg.
ATLANTA, GA.

LANDSCAPE ARCHITECT and ENGINEER

Town Planning and Mill Village
Developments
Parks, Real Estate Subdivisions,
and Cemeteries
Resort Hotels and Country Clubs
Private Estates and Home Grounds

Complete Topographic Surveys
General Designs, Planting, Grading
and Detail Plans
Supervision of Landscape and
Engineering Construction
Sewer and Water Development

Largest Landscape Organization in the South

Pageland, S. C.—The Pageland Cotton Mills have let contract to Michael & Bivens, Gastonia, N. C., for installing motors and a complete lighting system.

Burlington, N. C.—A new hosiery mill to be known as the McEwen Knitting Company, has been organized here. J. H. McEwen, who recently resigned as manager of the Charlotte Knitting Company, Charlotte, and B. V. May, hosiery manufacturer of this place, are among those interested.

The new mill will have quarters in the Hatch building on Worth and West Davis streets and will begin with an initial equipment of 20 knitting machines. The product will be ladies' pure silk thread hosiery and operations are expected to begin about the first of February.

Greenville, S. C.—Every one of the seventeen large mills in the vicinity of this city is now on full time day operation and about half of them are on full night and day schedules. The latter class includes the big Judson and Dunean plants, which manufacture fine cotton and silk mixed goods. The Woodside Cotton Mills Company, which operates six plants scattered over this section, embracing over a quarter of a million spindles, is on full day schedules, and some of the mills are on night schedules also. The Victor-Monaghan chain, which operates half a dozen plants making fancy and plain goods, is running full time. Mills at Anderson, Spartanburg, Union, Chester, Rock Hill and at other points over the upper portion of this State are running on full time with hardly an exception.

Yadkin, N. C.—While business of the North Carolina Finishing Company has been on the increase for some time, it has been unusually good recently, as indicated by an output Tuesday of last week of five solid carloads from the mill, one to New York, one to Baltimore, and three for the Spencer transfer. The management of the mill states that the outlook for still better business is fine. The mill has recently made a number of improvements by building a large amount of storage room around the plant, which is a busy place these days.

Among other outside improvements now under way is the construction of a reservoir of 1,000,000 gallons capacity, which is located on a hill, the highest point in or near the town. Water will be supplied from the river, well filtered and stored in the reservoir, affording ample gravity for use in all the homes of the town as well as for use in the large bleachery mill.

Hemp, N. C.—Production of novelty dress fabrics at the County Moore Mills, Inc., will start about January 1. The County Moore Mills will have an equipment of about 300 box looms, housed in a modern weave shed erected under the supervision

of Lockwood, Greene & Co. Located on the Norfolk Southern, the plant has its own siding and is able to make good connections with rail and water shipment at Norfolk. H. D. Leigh is superintendent of the mill. A new mill village has been built and some operatives are already occupying the buildings. Art silk filled dress goods will be the first product of the looms.

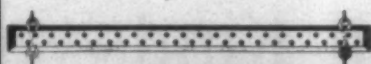
Baltimore, Md.—Three of the plants of the Mt. Vernon-Woodberry Mills, Inc., in the Baltimore district have resumed full-time operating schedules. All its Southern plants are operating on full time. For the first time in four years, it is said, the company's mills are on full schedules.

It is understood that the local mills will be continued in operation permanently, and will in no way be affected by the big developments of the company in Tallassee, Ala., and Columbia, S. C.

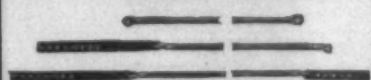
Recent advances in the voting trust common and preferred stocks are taken as an indication of the improvement in the business of the company. Common reached a new high level today, when it sold at 15, and preferred has been selling at the new high level of 64. Upward of 1,000 shares of both common and preferred have been traded this week on the local stock exchange.

Dalton, Ga.—According to a report from officials of the American Thread Company, the first unit of their mill at that place, now under construction, will be in operation April 1. The first unit of the plant, to have 35,000 spindles and manu-

Improved Dobby Chain



Dobby Cords



Rice Dobby Chain Co.
Millbury, Mass.
Send Us Your Order Today

COMPLETE DYEHOUSE EQUIPMENT

Special Machinery for
Textile Mills
**The Klauder-Weldon Dyeing
Machine Co.**
Bethayres, Pa.

LOOM STRAPPING

Check Straps--

Lugs,

folded and stitched, cemented—

Rounded and flat

Harness Straps--

Bumpers--

Hold-ups--

Binder Straps--

Power Straps--

Friction Discs--

We specialize and know your looms.

Ask your jobber.

The Druid Oak Belting Co., Inc.

Baltimore—Boston

R. K. WOOTTEN,
President and General Manager
JOAB MULVANE,
Vice-President and Treasurer
T. AUST, Secretary and Assistant Treasurer

CHICKASHA COTTON OIL COMPANY

Capital Stock \$1,350,000.00

COTTON DEPARTMENT

W. M. RATTAN, Manager

Domestic

Chickasha—Oklahoma

Code: Shepperson '78



Seydel-Thomas Co.

Textile Chemicals
for Best Weaving

Seyco Products

The result of twenty years' study and practice in treatment of Sizing and finishing problems.

Main Office and Plant, 35 Glenn St., Atlanta, Ga.

facture threads, has cost about \$2,000,000.

Machinery is now being installed in the first unit. It is planned to build three other units of an equal size and capacity. For each of these units, a similar number of employees' residences will be erected. The company will very shortly begin work upon a \$50,000 school building, and also will build a church and community center. Around this mill has been erected one of the most up-to-date mill villages in the South. It consists of 150 thoroughly modern homes, at a cost of \$315,000. Streets have already been laid out and miles of concrete sidewalks have been constructed. When the four units of the mill are completed, it will have 120,000 spindles, with a total investment of \$6,000,000.

Lockwood, Greene & Co., of Atlanta, are the engineers, and A. K. Adams Company, Atlanta, are the contractors.

J. E. Serrine & Co. Open Office in Chattanooga, Tenn.

J. E. Serrine & Co., of Greenville, S. C., announce the opening of offices in Chattanooga, Tenn., with Fred L. Bryant in charge. Through this office, in the Tennessee Electric Power Building, J. E. Serrine & Co. plan to serve northern Georgia, Alabama, Tennessee and Mississippi with the same service as rendered the Carolinas and Virginia by their Greenville office.

Attention Mill Managers

Competent cotton man employed by present firm for five years, desires change January first with mill as cotton man and office work. Personal interview. References from present and past employers. No tobacco or booze. Any offer or place considered. Cotton Classer, care Bulletin.

"ATLANTA" HARNESS

"Quality and Service
That Satisfies"

**ATLANTA HARNESS
& REED MFG. CO.**

ATLANTA, GA.

P. O. Box 1375

Telephone Main 0517

THE CHOICE OF A HUMIDIFYING SYSTEM

must be one that for simplicity with great capacity and economy in maintenance produces uniformly such conditions that may be determined for the different requirements of the work. In the American Moistening Company's method of humidifying, all such requirements are GUARANTEED

Our COMINS SECTIONAL HUMIDIFIERS

Our FAN TYPE and HIGH DUTY HUMIDIFIERS

Our VENTILATING Type of Humidifier (Taking fresh air into the room from outside)

Our ATOMIZERS or COMPRESSED AIR SYSTEM

Our COMPRESSED AIR CLEANING SYSTEM

Our SIMPLEX HUMIDIFIER—One Pipe—No Pressure Pipe

Our CONDITIONING ROOM EQUIPMENT

Our AUTOMATIC HUMIDITY CONTROL (Can be applied to systems already installed)

Our AUTOMATIC TEMPERATURE CONTROL

Are all STANDARDS OF MODERN TEXTILE MILL EQUIPMENTS

AMERICAN MOISTENING COMPANY

BOSTON, MASS.

SOUTHERN OFFICES, 276 Marietta St., Atlanta, Ga., No. Charlotte, N. C.

Established 1896

Incorporated 1914

LOWELL SHUTTLE COMPANY

Manufacturers of

BOBBINS SPOOLS SHUTTLES

Write or Telegraph for Quotations

Office and Factory: 19 Tanner St., LOWELL, MASS

Meeting of Carders' Division

(Continued from Page 17)

cards and amount of pounds the card gets off per yard and something of breaking strength, and I want to find a medium.

Chairman: Mr. Willis, have you any figures on stripping?

Mr. Folk: We made an experiment at Clemson to count off speed about 1-3 and didn't make a difference in breaking strength.

Chairman: What about breaking strength from various periods of stripping? Answer: We haven't tried that.

Mr. Layton: Once upon a time, not since I have been on my present job, a hand got to kicking about wages. They were only getting a small wage and wanted more, and I went to the superintendent and he said I should cut off one stripping. I was stripping 3 times a day. Said just twice a day, and I did it, and in about two weeks after that he sent for me to come in the cloth

room and he began to show me over the cloth. Said this cloth is bad. What's the matter? I said, "You remember you told me to cut off one stripping and I didn't think it best but you said to do it so you wouldn't have toraise wages. He said he remembered it and said, "You put the stripping back as quick as you can.

Mr. L. A. Andrews: I think the condition of the cotton affects this. We had some Western cotton and it was wet and moisture in it and we were stripping 3 times a day and we increased that stripping to 4 times a day and got better results. We were working to get good cotton and found had to strip 4 times a day. Cotton has a lot to do with stripping—the character of cotton you are using. We are running 1-1-16 Western cotton.

Chairman: That's something that has been brought out at various times and we have all agreed, I think, that the average mill should have more cards. Many times we are not able to influence the need

of the mill when buying as to just what they should have. I know the time has been when the manufacturers' agent or engineer would say how many cards to use but a number of mills are taking advantage of the situation in equipping mills with more cards. I mention a case in my own connection. We have built No. 2 mill and had some plans for 32 to 40 cards, not more than 40. That was the manufacturers and engineer's plan but the machinery men convinced me we should have more cards.

I've got 55 cards for 45,000 spindles, and it is the best investment we have. Get better results.

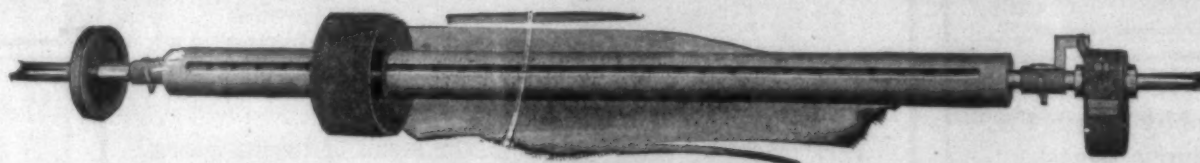
Mr. Campbell: I want to ask a question before we leave the cards and pickers, and I want help. I need it. We have at our mill 3 kinds of cotton, what you call soft and compressed local and double density. I call it. We have soft compressed and double density. Some man has said you couldn't cut it with an ax. I suppose that was double density and kinks and

warps around, and I want to know how to open that cotton up. Get it through without tearing things up.

Mr. Cocker: I have an idea of boiling mine to open it up. (laughter). Now, while this is up. I was over at a mill recently and the superintendent had some sort of appliance on cards running laps backwards and I was favorably impressed with it. They used it to finish up carding on the front. That was at Anderson. He was doing wonderful work on that carding about 90 No. a day on 1-1-4 cotton and cleaning it fine with that lap revolving. If there is anyone here from that mill I want to hear about it. I would like to change mine.

Mr. Clark: I think that has been tried every month since cards were invented but always went back. It looks fine but doesn't work.

Mr. Hightower: I don't think we ought to get away from Mr. Campbell's question in regard to breaking cotton. It seems to me that cotton of that kind should be run through

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the Murray cleaner. It would fluff it up and make it ready for the next machine, and I believe the second machine should have vertical openers.

Mr. Blair: You will have to open those lumps by hand. We saw a Murray opener running testing compressed cotton and when you find your cotton in that condition running through Murray opener won't open it, the only way is by hand.

Mr. Crocker: We tried every way to get ours open and the opener would not open it we had to call in a lot of negroes and pull it open by hand, which was very expensive. I can sympathize with Mr. Campbell. If we are going to continue to have cotton like that somebody should invent a machine for opening it.

Mr. Chairman: It is time to adjourn for luncheon. It's 12:45. The meeting will reconvene at the Oregon Hotel at 2 o'clock.

Afternoon Session.

The afternoon meeting was called to order at 2 p. m. in Oregon Hotel.

Chairman: In our discussion this morning we reached this point. We want to take up variation and average of numbers on drawing roving and section beams. Now that is out our line, but since we begun it, that is what we are finally working to, and that is where it counts. Most mills lay more stress on weight of section beams than anything else. Somebody has averaged a variation for drawing sliver for a period of 20 days, we will be glad to hear from you. It may vary some more one day and some more another day, but for a period of 20 days you will get much better average.

Mr. Southern: The superintendent and I tested that out a while back. We are installing a humidity system at present but I found that certainly did work out fine. We run at same time last summer, cut night work out, and I noticed my numbers got a good deal better, because we are not exactly rigged up like we should be in our drawing and intermediates and slubbers, which causes a right smart variation of roving because we make it too heavy and we keep studying about how to overcome this variation with humidifier system like it was and the superintendent figured out this table. He was over at Charlotte at the show over there and some one showed him one of those tricks. We had just started the test with it to see how it would come out but somebody stole it, and afterwards lost it. We tested our humidity four times a day. But tested that out and found the drawing pretty bad. After testing that out I noticed my drawing got on good again. Of course the laps were listed. At night I would raise my laps $\frac{1}{4}$ No. at least. Raise them again about 1 o'clock $\frac{1}{4}$ No. again. But I have tested what Mr. Touch-

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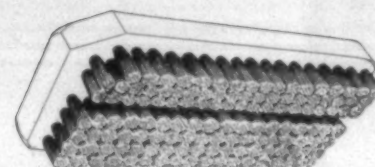
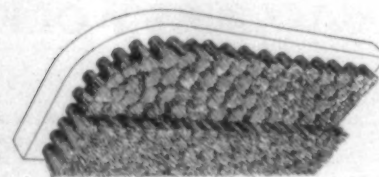
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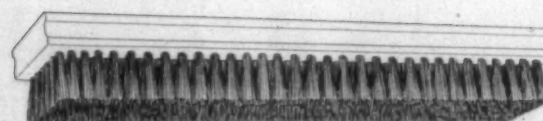
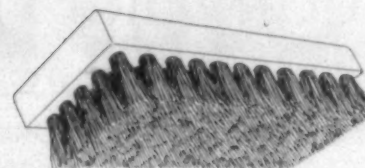


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stone is talking about and got good results.

Chairman: Someone else?

Mr. Touchstone: We have no humidifier throughout the card room at all. Nothing more than hand sprinklers installed a few years ago to kill the static.

Mr. Hightower: In testing humidity do you use psychrometer?

Answer: No, sir. Only use that stationary machine.

Mr. Hightower: I would like to know how you know that cloth varies in weave room.

Mr. Touchstone: We have had no serious trouble with variation had no complaint.

Mr. Hightower: In case you have a sudden variation in the room, a sudden change, then what would happen, Mr. Touchstone? Would you go to the slasher room and change sizing to take care of waste or wait to get back to picker room and take that out? If so, I think would take several weeks to get there.

Mr. Touchstone: If I were going to do anything to my cloth I'd do it with the filling.

Chairman: Then try the spinning room. If necessary to change anything go to the filling. Now I ask this question: Is your yarn hard twist warp and filling or soft.

Mr. Touchstone: Well I suppose you'd call it medium twist. If you got soft twist yarn it is more apt to take up humidity more rapidly unless the humidity is controlled by a regulator. They take care of that in the weave room. If you got hard twist it don't take in so much. If twist is changed during year in spinning room I don't know it.

Mr. Hightower: I don't know, I am interested to know how those numbers came out so well. My experience has been a greater variation than that. I think that is good. Splendid! Is Mr. Dixon in the room? Tell the gentlemen what you saw.

Mr. Dixon: It is about the evenest running work I have ever seen. It is the least variation in beams that you generally strike around over the country. Anyone can go down and look it over a wonderful thing. I think it is worth looking into.

Mr. Touchstone: During this entire period if there has been a draft gear changed in card or spinning I don't know it. Now in answer to Mr. Hightower.

To begin with, I was on 15-16 local. On the 1" Western grade cotton I naturally had to make a difference. I made another table. I had to make some adjustment in my carding until I could get set on the new cotton, and then outside of that I made no change until I changed a few days ago experimenting further with 15-16 local cotton it was a hard experiment. We have had no trouble since I got the second table in changing the 1" cotton. It may not be good in other places. One gentleman in Atlanta tried it and told me it worked out.

Mr. Dixon: Did your cloth room men, Mr. Touchstone, have any trouble in keeping the cloth up to the 5 point limit with that?

Mr. Touchstone: Not to my knowledge.

Chairman: Any body else experimented with this?

Mr. Hightower: The reason I am enthusiastic about that if you got anything better I would like to have it. My looms weave 1252 yards if it works for us why not for somebody else?

Chairman: Yes, this seems to be an interesting problem and we don't want to leave too quickly.

Mr. Touchstone: To begin with, I was looking for something and I had been watching the pickers—that had been my hobby all my life, and I kept watching and noticed the variation in relative humidity, and finally I found the relative humidity ran around 40 and I average my laps around 40, based my table on that 40. As she went up I went up, and when would go down I would go down. I had no way of figuring it out but just as it ran in my mind. I made up my mind it had to go about that way and ought to increase or decrease as that cotton would come off. The first table I made up was not very satisfactory. Humidity around 68 and 79 during extreme damp weather.

Mr. Hightower: Have you an air conveyor system in your mill? Answer: No, sir. I am in the Granby plant. Not the Olympia.

Chairman: Anyone else.

Mr. Martin: I would like to ask Mr. Touchstone how much he allows his laps to vary.

Mr. Touchstone: We run in what is called two limits, one-half each way.

Chairman: Any other questions?

Mr. Powell: How much does he allow in checking cloth each way? What variation?

Mr. Touchstone: We are on print goods—unusually low, 5 points each way. We had no trouble during this period in keeping them right.

Chairman: Any other question?

Mr. Layton: If a lap runs put on finisher 2 or 3 or 5 minutes during making of lap in front, will you lose that lap?

Mr. Touchstone: I should say if it did I would, but I don't believe a lap would ever run out as much as a minute on my machine.

Mr. Layton: I wanted to see if it were possible to beat the Kitson machine. So you won't lose the lap.

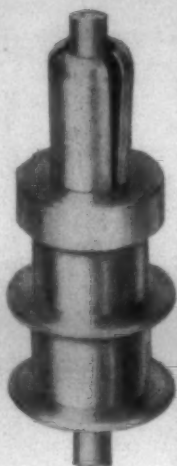
Mr. Touchstone: You can handle it twice but you can't handle it 3 and 5 times.

Chairman: Anything else to offer in the way of keeping numbers? The question has been asked here: What is the setting for 15-16 local cotton? I think everybody in the room has a different setting.

Chairman: Those who were at Blowing Rock meeting last summer remember the paper that was presented there by Mr. Shelton in regard to doubling the draft making it about 12, putting in about 12 ends.

Mr. Touchstone: I have experimented with those rolls and I think all agree that it's pretty hard matter to get proper roll setting. We are all seeking better results. I have the settings on the rolls of 1-inch Western from bite to bite on the back roll to the next roll. I give these in sixteenth, because it is more convenient: 1 6-16 and from second to third roll 1 5-16, third to

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fourth roll or front roll 1 4-16 or 1 1/4. That is 1-inch Western cotton. On the local cotton pretty near the same. I didn't have very smooth-looking sliver when put 15-16 cotton in and I set the rolls in various ways. This is my final setting. I left it that way because I thought I was getting best results. They looked better. Would be glad to hear from others on that.

Mr. Campbell: The same grinder grinds both cards, and sets them the same.

Mr. Waits: Do you use the same kind of cotton in both mills?

Mr. Campbell: Yes, the same kind.

Mr. Campbell: I expect I am the oldest man in the house and I have been a carder ever since 1890. I started in Greenwood Cotton Mill in 1890. I was the first man in Greenwood Cotton Mill. I have not solved all the problems yet. I want information and I think I ought to have it.

Mr. Layton: I am not able to say I can give information. If you have a curl on the fine work, as you call it, and it is not on the heavy work, it might be due to the fact that, as Mr. Touchstone said, he used the carbon paper, well in setting with the heavier work if you will try the carbon paper. Most people don't use carbon paper. We go from center to center.

Chairman: Let's work this out and help Mr. Campbell out before we meet again. We will leave that subject. We have now the question of twist in roving. Is there a difference between threads in roving that will make a difference between local and Western cotton?

Mr. Crocker: Local and Western are different and I think that can explain the difference. We are supposed to run 1-inch cotton, local or Western, and we get 1-inch cotton and I run a little less twist on Western.

Chairman: There's a larger percentage of waste in Western cotton than in South Carolina.

Mr. Andrews: We run local cotton and we have found that we can run with less twist on Western than on local and runs good.

Mr. Campbell: Our mills are going off local cotton on to Western 1 1-16 and I am very anxious that anyone here using Western cotton 1 1-16 will put me wise.

Mr. Layton: We changed from local 1-inch to Western and cut down 1 pound.

Mr. Hightower: Just for information, I have had six years experience under Lockwood, Greene & Co. on 1 1-16 cotton. I guess Mr. Touchstone will bear me out when I say I have stacks of experimental books and we have had six years experience. I can show you front row speed on spinning 123 and I have twist multiple 396 on it.

Chairman: I believe Mr. Campbell.
(Continued on Page 31)

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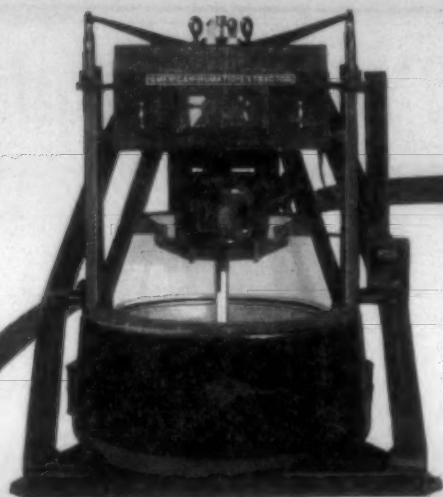
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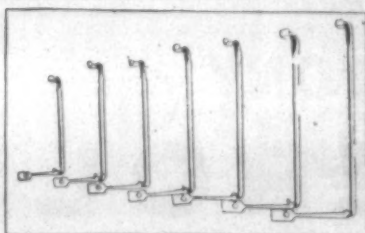


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WRITE FOR SAMPLES

Meeting of Carders' Division

(Continued from Page 29)

bell will find if he changes his cotton he will have to cut down his twist.

Mr. Southern: We went off local cotton on to 1 1-16 and had to cut the drawing down to 59 grain lower.

Mr. Clark: From what Mr. Touchstone says, it takes 5 per cent more local cotton than Western cotton to make the same amount of yarn. If you pay 10 cents a pound more for Western cotton than local you are coming out about the same.

Chairman: This brought us up to the question we want to discuss a few minutes now. That is the relative value of 1-inch local and Western cotton. We admit the Carolinas and Georgia have been up against it fighting boll weevil, etc., but they are going to put us up against it if we don't get better cotton from some of them. If we can bring pressure to bear in having the farmers plant the right kind of cotton, better quality seed. Will ask Mr. Clark to speak on that.

Mr. Clark: We are trying to get agriculturists in North Carolina to conduct an elimination process over the entire State just like they are doing elsewhere and get all the short cotton out of that country.

Chairman: I think the reason of it is this. We prefer the Western cotton in that there is a larger percentage of it up to what we call standard.

Chairman: One other question, and we have only three minutes to discuss it. Which is better, in case that it is necessary, to have a long draft on roving frame, or on spinning?

Mr. Crocker: I prefer to have long draft on roving. If you have it on spinning you have the doubling effect that you don't have on roving.

Mr. Todd: It makes practically no difference in it. I am figuring on changing roving frames and making the draft a little longer on spinning. My card room is limited a little bit. I don't want to jump unless I can get the opinion of men who have had experience.

Chairman: I believe it was at the Charlotte meeting a year ago I reported that I had been making some 70 yarn out of 12 hank roving and I changed my warp frame on my 13 hank and then reduced draft on spinning, and increased breaking strength 4 or 5 pounds.

Mr. Crocker: Yes, I have experienced that.

The meeting adjourned.

Wholesalers Review Conditions

The National Wholesale Dry Goods Association, in its latest market service letter, notes that business sentiment is greatly improved and that "the recovery indicated by sound fundamental conditions for many months is believed to be definitely started."

Commenting on the general trade situation, various phases of the cotton goods markets and the dress fabric style trends, the letter continues in part:

General Conditions.

"The fact that expansion is gradual is regarded with satisfaction. Most business men seem to believe a sudden boom would be harmful.

"Factory employment and production of basic commodities continue to increase. Textiles are no exception and reports from many centers indicate greater activity. Distribution of merchandise continues on a large scale and the general level of wholesale prices is advancing.

"Inventories of producers and distributors in all lines are reported as low.

Cotton Goods.

"After a spell of active trading the gray goods market has quieted down and prices on some constructions eased slightly. Some factors say it may be somewhat irregular until spring buying starts. Improvement is looked for again late this month or in January, as it is believed few interests have covered for the first quarter of the new year.

"A big buying movement is not looked for, but hope is expressed that continued good business will develop. Predictions are heard that resumption of demand will cause a firming of prices, but it is generally believed upward tendencies will be resisted.

"Business in finished goods is better. Percales have improved and one of the large printers recently withdrew its lines. Gingham is said to be improving gradually and in some quarters, it is stated, considerable business has been done at the new low prices. Bleached goods are also mentioned as selling well, but napped lines have been held back by mild weather.

"Indications point to a good demand for broadcloths for dresses during the coming spring and summer.

"It is expected that plain colors in pastel shades and Roman stripes will be in great demand.

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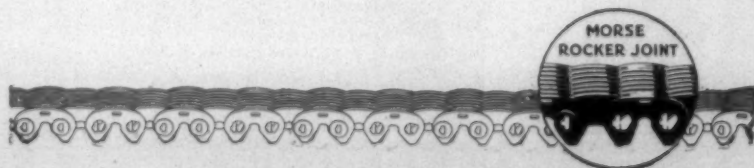
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Science of Fabric Construction

(Continued from Page 12)

upon the basic facts already established for them. For example, the expert designer has had so much hard work threshed out for him, that he does not have to figure out many problems. Below are some of the many things which have been set down as textile law or science.

1. When making fancy work it is always superior to weave the selvages on separate harnesses.

2. That cords in the fabrics will weave the best as a rule when put into a separate beam.

3. All ends which make fancy stripes as extra ends over and above the ends required for the ground work, should be placed on separate warp beams.

4. If there are a series of fancy stripes differing one from the other, it is best to have a separate top beam for each widely differing system.

5. Very fragile fabrics must have a taped selva to prevent the goods from being strained out of shape in the looms, or of being worn while passing through the processes of finishing.

6. When using more than one color in the filling, the color which is used the most should be put into the topmost shuttle.

7. The work must be adapted to the loom. It is as poor policy to try to make duck goods on a light weight loom, as it is to expect to weave handkerchief goods on a duck loom.

8. It is always more costly to weave plainer goods on dobby looms and dobby patterns than on Jacquard looms.

9. It costs a great deal to change over looms from one style of goods to a widely different style. A designer must always bear in mind that if he can possibly design new work which may be made on the same system previously used, great expense is prevented for the mill.

10. The designer is also trained to understand, and to remember that some fancy colors cost much more than others, and that he must average up his designs generally among the less costly colors, and to reserve the more costly colors to brighten up the lesser costly ones. In fact it is by this law of contrast, solely, that the finest and most attractive designs are brought out. There must be a base or a background of the lesser attractive colors upon which to build the super-structure—and the lovely pattern work.

11. It is also definitely understood that some patterns are more difficult to weave than others, and therefore cost more to the mill to put through. The designers work must average up, and not be all lean nor all fat.

12. It is also a well defined law, that dull or dead colors injure attractiveness. Colors must have life, lustre and stand out as something which radiates, catches the eye of the trader and of the consumer.

13. When making shirtings, of late years, a white back ground has been the prevailing one upon which to build the fancy effects.

14. When making colored dress goods more blue is used for a background than of any other color. White predominating only when the fancy effects are very light, small or secondary.

15. Designers also are well drilled into the fact that colors must harmonize and not jar one's sense of propriety.

16. Corded goods must not be calendered because it will flatter the cords and kill the well build up corded effects.

17. It is always a matter of trade knowledge that colored cotton goods are always greatly improved and brightened by carefully washing before properly finishing them.

18. It is generally quite well known what colors are fast, and those which are fugitive or not fast.

19. It is well recognized that some goods are well prepared for the trade with fugitive colors as others are with fast colors. Wrapping twines for example as they are used only once are usually colored with fugitive colors.

20. All of the ends in the warp which are used the most, and in largest quantities will work the best when put nearest to the reed or in front of the harnesses which are actuated less often.

21. It is also clearly defined that cloth is built or constructed much on the same principle that an ordinary dwelling house is built. Cloth has length, breadth, thickness, color, strength, certain wearing quality, and attractiveness.

22. This brings us up to the point of cloth analysis. There is nothing difficult about cloth analysis. Almost anybody may analyze a piece of cloth by merely following the rules as laid down herein. Having a piece of cloth to analyze, the first thing to do before mutilating same, is to get all data concerning same as possible. If it is a piece of shirting it will be usually 36" wide. If dress goods it may be 27 to 38", according to the class of goods which it belongs. It will either be necessary to ascertain the actual width, or plan to make it a certain width in order to compute the yards per pound. In order to accurately analyze cloth, the following data must be very carefully ascertained, and recorded. For example here is a piece of cloth from a 36" fabric there are 129 6square inches. If the piece measures four inches square, there will be 16 square inches in the sample. 1296 divided by 16 equals 81. Then the small sample piece equals 1-81 of a square yard. If this sample is carefully weighed on grain scales, and is found to weigh ten grains, and as there are 7000 grains, 1-81 of 7000 equals 86.42 grains, which when divided by 10 equals 8.64 yards per pound. If the piece is only three inches square, it will be only 1-144 of a yard, and as it will have only nine square inches, it will weigh that much less and our rule will bring us the same result. The next important step to take before mutilating the cloth sample is to tabulate the following information.

1. Weight—also yards per pound.
2. Warps ends per inch.
3. Filling picks per inch.

4. Filling cord picks per inch.
5. Warp ends of each color per pattern.
6. Warp end cords of each color per pattern.
7. Filling cord picks of each color per pattern.
8. Filling picks of each color per pattern.
9. Width of pattern.
10. Length of pattern.
11. Width of each stripe of color.
12. Fray the edge of the cloth and pull out as many yards of both warp and filling as available of each kind of yarns. Weigh each carefully. Multiply the amount of yards of each by 8 1-3 and divide the product by the weight of each in grains. This will give the several numbers of the yarns used.
13. Find warp numbers.
14. Find filling numbers.
15. Per cent amount of each filling.
16. Per cent amount of each warp.
17. Per cent amount of each color.
18. Per cent amount of each cords color.
19. Place the pattern on point paper.

From the above data, it will be possible for any other designer to reproduce the goods, and to order the yarns of each number and of each color to fill an order for any amount of yards. It will also be possible to calculate the cost of the goods. Here follows some of the very useful and interesting rules which are used and which are altogether indispensable to the expert designer, as well as to the ordinary cloth dissector or analyzer. There are other rules, but these are noted for their simplicity. Rule No. One is to ascertain the average number of yarn in a piece of goods when the warp and filling numbers are known, also the ends and picks per inch. The rule is to divide the ends and the picks per inch by their respective numbers. Add their quotients and divide their sum into the sum of the ends and picks per inch. The quotient will be the average number.

Example to Illustrate Rule No. 1.

Warp No. 40—80 ends per inch $\div 30 = 2$
Filling No. 30—60 picks per inch $\div 30 = 2$

Sum of 140 \div sum of 4 = No. 35 average yarn.

Rule No. Two is to ascertain the average number of yarn in a piece of goods when only the yards per pound are known. Draw a line horizontally. Place above this line the sum of the ends and picks per inch at the left. Also next to this the yards per pound, and the width of the cloth in the reed. Blow the line, place the constant number

and the parceling of the product at each process. It has also standardized the length, height, width, and the form and shape of the machinery.

Textile designing and manufacturing is one of the most wonderful of the arts and sciences of the age. It is employing the time of armies (Continued on Next Page)

Example to Illustrate Rule No. 2.

Ends per inch 80	Yds. Per Lb.	Width in Reed
Picks per inch 60		
140	\times 6	\times 33.33 = No. 35 average yarn.
(840 less 5%) = 800		.800 constant number.

Example to Illustrate Rule No. 3.

Average No.	Constant
35	800 = 6 yds. per pound.
\times	
Ends per inch 80	Width in reed
Picks per inch 40	
140	\times 33.33

840 less 5 per cent or 800, and proceed as in cancellation. The answer will be the average number of yarn.

Rule No. Three is to ascertain the yards per pound when the average number is known. Add the ends and picks per inch and place their sum under the line along side of the width in the reed. At the top of the line place the average number along with the constant number 840 - 5 per cent or 800 thus:

The rules given are substantial and will give the closest practical results and are safe working rules. A rapid rule to ascertain the strength of yarns is to divide the constant number 840 by 1-2 of the number of the yarn number, and add 10 per cent for combed work. Example: it is desired to ascertain the approximate strength of 40s carded and 40s combed yarns. $840 \div 20 = 42$ lbs. the strength of 40s carded, $42 \times 10\% = 46$ lbs. the approximate strength of 40s combed.

The scientific basis for textiles has been correctly and definitely established in many lines of research in connection therewith. We therefore have our correct standards of moisture and the relation of some to textile manufacturing. And we also have our standards of twists, of strength, of draughts, of tensions, speeds, weights, seconds, productions, numbers, colors, widths, temperatures, ventilation, lighting, prices, wages, capacities, spaces, traverses, pressures, ends and picks per inch, together with standards of processes, sales contract, and for the different grades of raw fibres and the various lengths thereof. There are also standards of fabrics with reference to classes and usages together with their standards of construction.

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Vote Against The Amendment.

Everyone with the good of the future manhood and womanhood of the country and of the country itself, at heart, should urge their members of the legislature to vote against this amendment.—Macomb (Ill.) Journal.

May Strike A Snag.

We see by the papers that Senator Dan Landon of King county is going to put the Child Labor Amendment to the Federal Constitution through legislature is short order this winter. We think maybe he will strike a snag. This state ought not to approve that Amendment, and will not if the people know what it proposes.—Yakima (Wash.) Republic.



Corner of Designers Work Room

same may be recognize at sight by the acquaintances of the subject.

Machines are operated which perform almost every human function excepting talking. Some enthusiasts even go so far as to predict the time when bales of cotton or wool will be placed into hoppers at one ends of a newly invented machine, and at the other end the manufactured material will emerge as completed suits of any size and style for which the machine is adjusted. Whatever may develop, the possibilities are beyond computation or prophecy. The science of textiles is continually making men, and the men are continually extending the textile science.

Little Likelihood Of Amendment Being Passed

There is little fear that the child labor amendment will ever be passed but it is well for every voter to become acquainted with the nature of this attempt to take dollars out of his pocketbook, liberty out of its citizenship, and the control of his children out of the home.—Bennington (Vt.) Banner.

Fear Extremists And Faddists

If it could be known that extremists and faddists could be withstood when Congress comes to pass legislation under the power granted, much of the opposition would pass away. But the American home dreads the pestiferous visitation and the arbitrary rules and orders of a federal officer.—Charleston (W. Va.) Gazette.

Danger From Idleness.

Perhaps the overwhelming popular defeat of the Child Labor Amendment in the Massachusetts referendum means that the Yankees believe that the average eighteen-year-old boy or girl of this generation is in more danger from idleness than from labor.—National Republican.

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DOMESTIC

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David Clark Answers Miss Heer

December 9, 1924.

Editor,

New York Herald-Tribune,

Miss Jean MacAlpine Heer, of the National Child Labor Committee, says in your issue of December 5th that, although there are less than 24 children under 14 years of age employed in all the cotton mills and other manufacturing establishments in the South, the Federal Child Labor Amendment is needed in order to keep boys from working in stores.

I do not know much about boys working in stores, but do not imagine that very many have their health ruined by waiting on a few customers, and Miss Heer has also overlooked the fact that all of the Southern States have compulsory education laws and most of the boys working in stores must be doing so after school or on Saturdays.

As usual, Miss Heer does not say how many boys work in stores, possibly because she wishes to leave the impression that there are many thousands.

Miss Heer quotes the Children's Bureau of the Department of Labor as saying that there are violations of the child labor laws of Georgia.

A bureau that is seeking an additional appropriation of \$1,000,000 per year has its agents sneak around in Georgia and reports 149 violations of the law, hoping that their report will aid them in securing the desired appropriation.

The same organization made a report upon the beet fields of Michigan, but the Michigan Legislature investigated and declared the report to be false.

There are no doubt a few violations of the law in Georgia, but there are not many and certainly no more than would be under Federal supervision.

Possibly Miss Heer will refer to the enforcement of the Volstead Act as an example of Government enforcement.

Miss Heer says that, although the Southern mills only employ 24 children under 14 years of age, she does not like some of the details of our laws.

I certainly regret that our Legislature neglected to send a draft of the child labor law to Miss Heer for her approval before enacting them. It was a great oversight, but somehow they had the idea that they were capable of enacting the kind of laws desired by the people of North Carolina.

This new idea of picking the noses out of the eyes of other States has not yet become popular in the South.

South Carolina does not permit a

divorce for any cause, and if she tried and could force her divorce standard upon New York there would be a cry of resentment from some of the leading advocates of the Child Labor Amendment, especially if the enactment of the standard could be made retroactive.

Miss Heer says that there are many like myself who have no conception of an adequate child labor law.

Possibly I have not Miss Heer's conception which is that of an immense Federal Bureau with thousands of women employed, at the expense of the taxpayers of the country, to enforce their standards upon the people.

I represent an industry that employs less than 24 children under 14 years of age and yet it is accused of "exploiting" children and of making money from the blood of those of tender ages.

The boys in the cotton mills of the South can, age for age, whip twice their number of the molly-coddle brothers and sons of the busy-body women who refer to them as dwarfed and broken specimens of humanity.

I would give a lot to see a comparative physical examination of a few cotton mill boys with some of those raised according to standards of Miss Heer and her friends.

DAVID CLARK.

Charlotte, Dec. 9, 1924.

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R. N. Edwards	Spinner
J. P. Faulfner	Weaver
W. I. Bailey	Cloth Room
P. J. Ford	Slasher
J. D. Duncan	Master Machinist
Bradley Batchelor	Machinist
T. W. Williams	Yard Overseer

Night.

Emory Sanders	Carder
J. E. Walker	Second Hand
J. P. Damson	Spinner
Wiley Hunnicutt	Loom Fixer
Riley Angles	Loom Fixer
M. F. Smith	Weaver
Will Lively	Loom Fixer
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Cotton Goods

New York.—Trading in the cotton goods markets was not quite so active during the past week. The volume of production, however, continued large, a large number of mills in both the East and the South having recently resumed full operations. Gray goods were somewhat easier. New lines of fall flannels will be opened this week. Sales of cotton blankets that were opened last week were large.

Printed goods for the spring sold well during the week, some printing concerns have withdrawn their lines for the present. Bleached cottons were firmer and some manufacturers are sold ahead for the next ten weeks. Colored cottons were firmer and sold well in small lots. Gingham showed a moderate movement.

New lines of novelty wash fabrics are being constantly offered. The best sellers among them are printed flannels, broadcloths, sateens and silk and cotton mixtures. Imports of fine gray goods continued large and are being finished in domestic plants. The week's business in the foreign markets was fairly large. Some business was done with the Red Sea ports, but the bulk of the business was for South America, the Philippines and the West Indies.

The market for print cloths and sheetings was firmer at the close of the week, after having softened somewhat on Wednesday and Thursday. In small lots sales reached over 50,000 pieces of print cloths, sheetings and convertibles.

Print cloths that were available at 8½ cents for contract deliveries on Thursday were held firm at 9 cents Friday and sales were made at that figure in lots running from 1,000 to 3,000 pieces. There was no change in other constructions save that prices were firmer and that fewer goods were to be had at some of the eased quotations of the early part of the week. There was not much doing in sheetings. Sales of 4-yard 37-inch goods were made at 10¼ cents and 5.50s at 7½ cents.

On drills for 37-inch, 3.95 yard, 10¼ net had been paid, with bids of less declined. There has also been some recent interest on 34-inch, 4.75 yard, with reports that additional looms, recently placed on this style, had been responsible for sales at under what had been the market. Contract in first hands was reported Friday at 9½ net, with some sold by second hands at one-half.

There were sales of spot broadcloth, silk and cotton mixtures and

lawns. Contracts were placed for a number of staple and fancy novelties. The business was not large and all traders did not share in the results. Spot 128x68s domestic broadcloth were sold at 23¼ cents. They were reported to be freely offered and in excess of the demand. Converters have goods coming forward in January and do not care to buy much in the meanwhile. Sales of spot 80x76s single end crepes were done at 25 cents, 25¼ cents and 25½ cents. Novelty shirtings were bought on contract and brassiere cottons were in steady demand all week. The buyers now request more artificial silk decorations in their goods.

There has been some good business reported in fancy broadcloths, with dyed artificial silk stripes.

Spots of 39-inch, 88x140, 5.10 yard, combed twills, sold at 23¼ cents.

There were fewer inquiries for cotton duck in the market this week. Many small buyers indicated they would be in the market after inventory taking time. This business, when it materializes, will be very welcome to the mills that are coming to the end of runs on older contracts.

The tire fabric mills do not expect much buying to materialize until February when additional orders will be placed. The only business passing has been for small lots of prompt goods with an occasional contract. The best price obtainable has been around 54 cents a pound.

At Fall River, with daily reports showing but little interest in the print cloth market, it was generally expected that the sales for the week would be light, and which are estimated at 30,000 pieces. Wide and narrow prints have been absolutely dormant, and interest has been confined wholly to low count print cloth of the 36-inch category, with a sprinkling of sateens and twills, mostly on order.

be a lull this month in view of the approaching inventory season. Buyers have shown no interest, inquiry being at a very low ebb during the week, and mills, on the other hand, have not been anxious to press for business.

Cotton goods in primary markets were quoted as follows:

Print cloths, 28-inch, 64x64s, 7¼ cents; 64x60s, 7 cents; 38½-inch 64s, 9½ cents; brown sheetings, Southern standards, 15½ cents; denims, 2.20s, 19½ cents; tickings, 8-ounce, 26 cents; prints, 9¼ cents; staple gingham, 12½ cents.

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The Yarn Market

Philadelphia, Pa.—The yarn markets continued inactive during the week. Spinners continued firm in their asking prices, holding out for prices ranging from 1 to 3 cents a pound higher than some dealers would accept. Buyers' ideas were also out of line with quoted prices. Some price concessions were noted on scattered lots of spot yarns. The comparative strength of raw cotton proved a strengthening factor where prices were concerned. Inquiry was fairly large, but only a few sales resulted.

Some activity was noted in tinged yarns. An order for around 30,000 pounds of 30s two-ply tinged tubes was reported on the basis of 49 cents. Another order of 30,000 pounds for 8s three-ply tinged of the same description was reported on the basis of 36½ cents.

Current business concerns small lots only and the general movement of yarns for the week was very unsatisfactory. Buyers showed less confidence in values than they displayed two weeks ago. Spinners, however, are holding firm and believe that a strong market is ahead. They point out that the last few weeks of the year is always a period of seasonal dullness and that buyers will remain out of the market, except for their most pressing needs, until after the holidays and the inventory period.

As far as the whole yarn situation is concerned, the most encouraging feature at present is that while yarn prices are lower than they were a year ago, the manufacturing margin is higher. Spinners believe that there is still a very large potential demand for yarns that must come to light within the next 60 days. There is no accumulation of stocks, which means that a resumption of buying will be immediately felt by the mills.

Quotations in this market are as follows:

Two-Ply Chain Warps.			
2-ply 8s	41 a	2-ply 26s	49 a50
10	42 a	2-ply 30s	50½ a52
2-ply 16s	44 a	2-ply 40s	57 a58
2-ply 20s	45 a	2-ply 50s	65 a66
2-ply 24s	48 a49		
Two-Ply Skeins.			
8s	39½ a	40s	54½ a55
10s to 12s	41 a42	40s ex.	57 a58
14s	42½ a	50s	65 a
16s	43½ a	60s	74 a
20s	44 a44½	Tinged Carpet	
24s	47½ a48	3 and 4-ply 26½	a37½
26s	49 a	White Carpet	
30s	50½ a51	3 and 4-ply 38	a39
36s	54 a		
Part Waste Insulating Yarn.			
8s, 1-ply	35 a35½	12s, 2-ply	38½ a39
8s, 2, 3 and		20s, 2-ply	44 a44½
4-ply	36 a	26s, 2-ply	48½ a49
10s, 1-ply and		30s, 2-ply	49½ a50
2-ply	37 a		
Duck Yarns.			
3, 4 and 5-ply		3, 4 and 5-ply	
8s	39 a40	16s	43½ a44½
10s	40 a41	20s	45 a
12s	41 a42		

Paulson, Linkroum & Co., Inc.

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Single Chain Warps.			
10s	41a	24s	47½a
12s	41½a	26s	48½a
14s	42 a	30s	50 a51
16s	43 a	40s	57 a58
20s	44½a		
Single Skeins.			
6s to 8s	29 a	20s	44½a
10s	40 a	24s	46½a
12s	41 a	26s	48 a
14s	42 a	30s	50 a
16s	43½a44		
Frame Cones.			
8s	39 a	22s	42½a43
10s	40 a	24s	44½a
12s	40½a	26s	45 a
14s	41 a	28s	46½a
16s	41½a	30s	49 a
18s	42 a	30s tying in	47 a
20s	42½a	40s	55 a56
Combed Peeler Skeins, Etc.			
2-ply 16s	55 a56	2-ply 50s	70 a73
2-ply 20s	57 a58	2-ply 60s	75 a80
2-ply 30s	60 a62	2-ply 70s	85 a87
2-ply 36s	60 a65	2-ply 80s	95 a
2-ply 40s	65 a67		
Combed Peeler Cones.			
10s	50 a	30s	60 a
12s	51 a	32s	62 a
14s	52 a	34s	64 a
16s	53½a	36s	65 a
18s	53 a	38s	68 a
20s	53½a	40s	70 a
22s	54 a	50s	75 a
24s	54½a	60s	80 a
26s	55 a	70s	90 a
28s	57 a	80s	95 a
Carded Peeler Threads Twist Skeins.			
20s, 2-ply	52 a	36s, 2-ply	62 a
22s, 2-ply	53 a	40s, 2-ply	64 a
24s, 2-ply	55 a	45s, 2-ply	69 a
Carded Cones.			
10s	47 a	22s	53 a
12s	48 a	26s	55 a
14s	49 a	28s	57 a
20s	52 a	30s	59 a

Yarn Spinners' Bulletin.

The Bulletin of the Southern Yarn Spinners' Association says:

"Active demand for cotton yarns has declined to some extent due to the holidays, and the fluctuation of the cotton market. While admittedly yarn values are dirt cheap, buyers are hesitant to cover their future requirements hoping the market will ease off, and enable them to purchase more advantageously. A strong effort has been made to bear prices during the temporary dullness of the market.

"Business is likely to remain quiet until after the first of the year. Buyers have covered their immediate needs, and for the present are unwilling to anticipate their future requirements. Spinners have sufficient orders for the immediate present, and are not endeavoring to secure future business at prevailing prices.

"The Government report of the 8th estimating the crop at 13,153,000 bales, and reported ginnings of 12,225,000 has served to strengthen yarn prices.

"The temporary dullness of the market is not through any lack of potential demand, but simply occasioned by the reluctance of the consumer to buy in advance of actual requirements. The spinner's attitude of declining business at shaded prices is having a noticeable steady effect on the yarn market."

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Wanted

Experienced textile supply salesman to represent Southern firm in State of Georgia and Alabama. Liberal commission. Address "Sales," care Southern Textile Bulletin, Charlotte, N. C.

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Band men. Cornet, clarinet, baritone, others. Write stating what you do in mill. Our men are paid for their service to band. Kickers and boozers, save your stamp. Address Band, care Bulletin.

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To represent in the Southern States a Northern soap manufacturing concern. Charles P. Raymond Agency, 294 Washington St., Boston, Mass.

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We do not guarantee to place every man who joins our employment bureau, but we do give them the best service of any employment bureau connected with the Southern Textile Industry.

WANT POSITION as roll coverer. Have had 20 years' experience and can give excellent references. No. 4324.

WANT POSITION as overseer spinning. Overseer for 20 years on all counts and colors, both carded and combed, from various stocks. Can get results. Would consider \$33 weekly, with free rent. No. 4327.

WANT POSITION as superintendent. My experience covers mills in both North and South on a wide variety of goods and yarns. Excellent references to show past record of unusual achievement. No. 4328.

WANT POSITION as superintendent of cotton yarn or good mill. Man of unusual ability and can give references to show excellent past record. No. 4329.

WANT POSITION as overseer spinning or night superintendent. Qualified by experience and training to handle room on efficient basis. A-1 references. No. 4330.

WANT POSITION as overseer weaving. My experience covers wide variety of fancy goods, including silk mixture. First-class references as to character and ability. No. 4331.

WANT POSITION as overseer carding or spinning, or would take good second hand's place. North Carolina preferred. Long experience I. C. S. graduate, age 30, married, sober. References. No. 4332.

WANT POSITION as superintendent or overseer weaving. Practical, experienced man on many different fabrics. Long and satisfactory record as overseer and superintendent. Best of references. No. 4333.

WANT POSITION as overseer cloth room. Now employed, but wish larger place. Long experience. Best of references. No. 4334.

WANT POSITION as superintendent or assistant superintendent in good mill on white work. Man of good habits, unusual ability and have long record of satisfactory services. No. 4335.

WANT POSITION as superintendent, prefer yarn mill. Now employed but can change on short notice. Best of references. No. 4336.

WANT POSITION as superintendent, or overseer carding, spinning and twisting. Experienced man with excellent past record. Good references. No. 4337.

WANT POSITION as overseer carding or spinning, or both. Now employed, but want larger place. First-class references to show character and ability. No. 4338.

WANT POSITION as overseer weaving or assistant superintendent. Have had 19 years as overseer on all grades of yarn and cloth. Excellent references. No. 4340.

WANT POSITION as overseer carding or spinning or superintendent of yarn mill. Now employed but can change on short notice. Can get quality production at low cost. Best of references. No. 4341.

WANT POSITION as overseer carding, 20 years as overseer on all classes of work. Now employed. Age 40, married, have family. Good references. No. 4342.

WANT POSITION as overseer weaving. Experienced on wide variety of fabrics, both plain and fancy. Have excellent record and can give first-class references as to character and ability. No. 4343.

WANT POSITION as superintendent or overseer carding or spinning room. Familiar with fine and coarse numbers and know how to get satisfactory results. Good references. No. 4344.

Textile Production Index Up 10 Points in October

Washington, D. C.—According to the Department of Commerce index, made public recently, production of textiles stood at 112 for October, this year, as compared with 92 for September, and 111 for October, 1923, based on 100 as of 1919.

Production of raw materials as measured by the department's index for 51 commodities, stood at 180 in October, which may be compared with 152 in September, and 157 a year ago. The index of crop marketings based on 26 commodities, stood at 246 in October, as against 193 in September, and 184 a year ago.

The index of manufacturing production based on 64 commodities, also relative to 1919 as 100, stood at 123 in October, as contrasted with 113 in September, and 123 in October, 1923.

The index of commodity stocks based on 45 commodities, after adjustment for the seasonal element, standing at 138, as of October 31, compared with 136 at the end of the previous month, and 118 a year ago.

October Cotton Yarn and Thread Exports

Washington.—Domestic exports of cotton yarn and sewing thread during the month of October had a total value of \$1,042,908, according to figures made public by the Department of Commerce.

The figures show that 1,007,413 pounds of carded yarn, not combed, were exported, of which amount Argentina, as in the past four months, was the heaviest purchaser, that country buying 811,728 pounds valued at \$338,455. The second heaviest purchase was made by Uruguay, 85,021 pounds costing \$34,815.

There were 733,142 pounds of combed yarn exported, with Argentina as its heaviest purchaser, 295,659 pounds valued at \$167,976. Canada ranked second, buying 145,639 pounds amounting to \$123,789.

Sewing thread exported amounted to 130,392 pounds. The Philippine Islands, as in the past four months, made the heaviest purchase of this commodity, 74,038 pounds valued at \$96,844. Canada, the same as in September, ranked second, with purchases of 29,808 pounds amounting to \$34,144.

Thirty-nine countries purchased cotton yarn and sewing thread from the United States during October.

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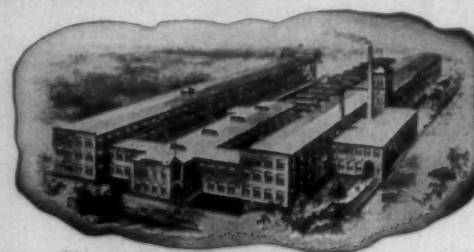
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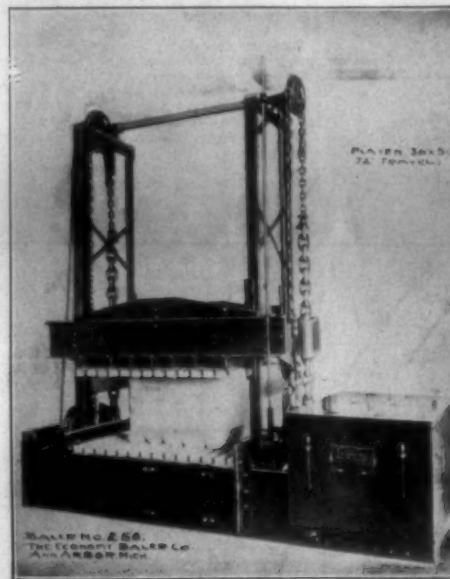
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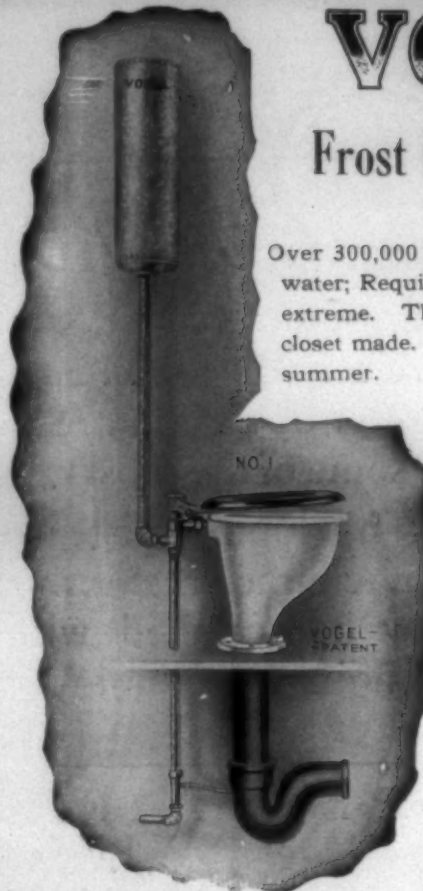
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